Eerik Lagerspetz

Social Choice and Democratic Values

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Social Choice
and Democratic Values

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For Sari

Preface

This book has a very long history. The oldest parts of it have been written over twenty years ago. After that I have abandoned the text, taken it up, and again abandoned it. I changed the general plan of the work, changed it again, and finally returned to the initial plan. Many non-philosophers, and even some philosophers, tend to think that philosophy is basically inventing justifications for the beliefs you already happen to have. This book—and it *is* meant to be a philosophical book—is a counterexample. During the writing process I have changed my mind about many issues—and more than once.

J. R. Tolkien's Hobbits, those lovable creatures, liked to have "books filled with things that they already knew, set out fair and square with no contradictions". They would not like a book like this. It is not set out fair and square and it probably contains contradictions. I hope, however, that it is not filled only with things the readers already know.

Christian List, Gerry Mackie, Anthony McGann, Don Saari, Maurice Salles, and Reinhardt Zintl.

During all these years my sons, Leevi and Simo, and Sari's sons, David and Daniel, have gently tolerated my absent-mindedness and strange moods. I thank them for their understanding and support.

So, there is one person left. By loving me, by allowing me to love her, Sari has given me the strength to continue. To her, this book is dedicated.

Turku, Finland   Eerik Lagerspetz
May 2015

Contents

Chapter 1
Introduction

1.1 On Interpretation

A specter haunts the theory of democracy. Over 200 years ago, the Marquis de Condorcet, a mathematician and a philosopher, noticed that in some cases the simple majority rule produced indeterminate results; any proposed alternative could be beaten by some other alternative by a majority of votes. In the early 1950s, the Nobel laureate Kenneth Arrow demonstrated that such problems are unavoidable in all intuitively democratic (and in many intuitively undemocratic) decision-making bodies. These results have created a new discipline, the study of social choice. The study of social choice has produced more and more results in an increasing speed. Most of them are impossibility results; many of them are quite impenetrable for a lay person. Nevertheless, the basic results seem to say something important about the nature and workings of democracy. They should be interest, not only a political philosopher but even the lay person.

The study of social choice seems to be the truly "dismal science"—an epithet once reserved for economics. Thus, in the early 1970s several theorists proved that under the conditions used by Arrow, every voting system is vulnerable to strategic manipulation by shrewd voters, while others paid attention to the fact that under many possible configurations of opinions, the voting order does determine outcomes. Even proposals supported by unambiguous majorities may be rejected because of the chosen voting method. Such results seem to confirm the view held by the numerous critics of democracy at least since Plato: democracy is in some sense an irrational form of government. However, the results produced by Condorcet, Arrow and others are, just formal results. Can they really have such dramatic consequences? Do they really concern democracy as we practise it, democracy as an everyday way of making collective decisions? Should institutional designers take them into account? How they should do it? What about the ordinary citizens? Do these results undermine the general legitimacy of democratic institutions? And what would be the alternative?

One could say that there is no consensus on these issues. That would, however, be an understatement. Starting from the premises provided by the theory of social choice, people have been able to move to all possible directions. It has, for example, been claimed that Condorcet's "paradox", Arrow's Impossibility Theorem and the related results are merely mathematical curiosities with no practical relevance. It has also been claimed that the results show how democracy is strictly speaking impossible and that, because of these results, we are forced to choose between "dictatorship and chaos". Further, the results are used as arguments for the superiority of a liberal or a utilitarian conception of democracy, but also as arguments for the inferiority of both conceptions. The same results, so are we told, show that all notions of "common good" or "general interest" are incoherent, but also that we cannot have a democracy without them. Further, according to some theorists the social choice results recommend direct democracy; while according to others they recommend representative democracy. Vote-trading common in some representative assemblies is either supposed to make the results largely irrelevant, or then it is said to be the very root of the supposed evil. From the same impossibility results, different people have found justifications for republican institutions, bicameralism, parliamentary absolutism, anarchy, or free markets, as well as for constitutional review, extensive deliberation, or revolutionary Utopianism. The results are said be misleading, and due only to Arrow's and other theorists' over-individualistic methodological framework. Or, alternatively, the results are misleading because of their inventors' insufficient individualism. They may be rendered as harmless by deliberation and discussion, or by institutional constraints, or by basic socio-political facts. Perhaps the results are important but beneficial, and actually reveal the basis of the modern pluralist democracy. This work contains examples of all these claims. Some of them are analysed in detail, others are just mentioned in passing.

If the formal results themselves are proved to be beyond any logical criticism, why there is such enormous variety of interpretations? There are at least three interrelated reasons. The first issue is the very nature of the basic results. Although they are formal, they are sufficiently transparent and surprising to arouse curiosity among laymen (that is, among those not having much mathematical training—I am one of them). At the same time, they are sufficiently complex to invite misunderstandings. Second, there is the central task of interpreting the results in terms of concrete decision-making procedures. As such, Arrow's Theorem and its relatives are just logical results. They do not determine their own interpretation. At the general level, they can be interpreted as results about different ways to process information included in ranking-orders of individual elements in order to produce a more general ranking, or to choose one or several elements. In democratic contexts, the results are supposed to tell something about the ways in which voters' preferences are expressed and counted in general elections, representative assemblies, and referenda. Electoral laws, however, are not written by social choice-theorists, but by jurists and politicians. These laws and practices cannot be understood without studying dull institutional data. Not all theorists of social choice have been willing to undertake the task. A large part of their formal work seems to

have no clear connection with the reality, and many interpretations presented in the more technical literature are as problematic as in those appearing in the works of philosophers and other non-specialists.[1] As Aanund Hylland has wisely said:

> to determine whether a given structure is, for example, a vector space, is generally a straightforward matter. Even if it occasionally may be *difficult*, it certainly does not involve issues of judgment. When a theorem of social choice is transferred from one interpretation of the theory to another, both the result itself and the conditions (axioms) change their meaning. It is possible that a condition which is reasonable or even compelling in one interpretation becomes less so, or totally meaningless, in another. This underlines the need for being explicit about the interpretation (or interpretations) one has in mind when a formal result is presented and discussed; if this is not done, the result has no other significance than the purely mathematical. (Hylland, 1986, 46–47)

Third, the interpretations of the social choice results are expected to have normative dimension. Now, at last, we have arrived to the philosopher's terrain. A philosopher, however, cannot add anything useful to the discussion on the role of the theory of social choice without fully grasping first, the results themselves, and second, their institutional interpretation. Most people interested in political philosophy are not particularly interested in electoral laws, committees, or voting. This, I think, is a mistake. Voting is a central institutional element in modern societies. There can be voting practices without democracy. But there cannot be a democracy without voting practices. A political philosopher needs at least a general conception of what voting is, and what is its role in democratic societies.

1.2   A Philosopher Challenges a Mathematician: A Nineteenth-Century Dispute

The problem of interpretation has always been a part of the study of social choice. From the early beginnings, there have always been those who think that the formal results themselves can prove beyond doubt that specific institutional arrangements are the best or the only right ones. There have also been those who tend to dismiss the same results as mathematic curiosities without any practical impact. The opposing views were already present in an interesting dispute on voting methods which broke between two learned professors of the University of Helsinki, Finland, in 1862.[2]

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[1] Actually, there are at least three book-long studies that could be counted as serious attempts to combine the technical, empirical and philosophical aspects of the problem: William H. Riker's *Liberalism against Populism* (1982), Gerry Mackie's *Democracy Defended* (2003) and Antony McGann's *The Logic of Democracy* (2006). There are also numerous interesting, important, and philosophically relevant works dealing with the central issues of social choice. For my purposes, those written by Hannu Nurmi, Donald G. Saari and Amartya K. Sen have been especially illuminative.

[2] See Lindelöf (1862a, 1862b, 1862c); Snellman (1862a, 1862b, 1862c). According to the often-repeated story, the theory of social choice was invented by two eighteenth-century French noblemen: Borda and Condorcet. After their contributions, the subject is said to have fallen into

The participants of this heated dispute were both prominent intellectuals in the nineteenth-century Grand Duchy of Finland, an autonomous province annexed to the Russian Empire some 50 years earlier. Lorenz Lindelöf (1827–1908) was the Professor of Mathematics, a noted mathematician and statistician who has studied for many years in Paris. His opponent, Johan Wilhelm Snellman (1806–1881), was the Professor of Philosophy and also the un-official spiritual leader of the Finnish national movement. Later, both men would make brilliant careers. Lindelöf became the Rector of the University and a long-serving representative in the Finnish Estates. Finally he was made the head of the Office of Education. Snellman's political career was even more spectacular. He was nominated to the Senate, the highest executive body of the Grand Duchy. As a Senator, he became the prime mover behind many important projects—for example, the establishment of the national Finnish currency and the building of the railway network—which would create the necessary preconditions for the independence of Finland. Rarely, if ever, has any professional philosopher had a comparable influence upon the fate of his own country.

The dispute between these two learned men was sparked by a minor nomination process within the University, the choice of a new University Librarian.[3] The University of Helsinki followed the practice initially adopted in all self-governing public corporations (e.g. in cities, townships and parishes) in the Swedish Empire: When an office has to be filled, the members—in the case of universities, the professors—had the right to put three candidates into a preferential order. The nominating authority—the King or his representatives in the Swedish times, the Czar or his representatives in the Grand Duchy of Finland—had then the right to choose one of the three candidates submitted by the proposing body (about the history of the practice, see Sect. 2.1.4 below). Thus, it was not enough that the voting members were able to pick their favourite. They were also expected to put

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oblivion. At the end of the nineteenth century, it was temporarily rescued by Charles Dodgson (a.k.a. Lewis Carroll) and by E. J. Nanson, but nobody was really interested in their work. The theory of social choice was again forgotten, until two economists, Duncan Black and Kenneth J. Arrow, reinvented it and finally established it as a legitimate academic discipline after the Second World War. This story is repeated in the literature on social choice (for example, McLean, 1991; Riker, 1961, 901; 1982, 2). It follows the account once given by Duncan Black in his classic work, *The Theory of Committees and Elections* (1958, 156–213). Black's account, however, was meant to be the first rather than the last word about the historical roots of the newly reinvented discipline. Black used only French and English sources, and did not try to go back beyond the late eighteenth century. My account on the Finnish dispute shows that the standard story is somewhat mistaken: Although there was no cumulative progress between the late eighteenth and mid-twentieth century, the results once proved by Borda and Condorcet were not completely forgotten.

[3] This was neither the first nor the last time when an academic nomination process stimulated the interest in the study of social choice. J. C. de Borda's ground-breaking article (1781) was intended to be a contribution to discussion on the proper nomination method for the prestigious *Institut de France*, while Charles Dodgson's writings on voting were inspired by the nomination processes of the Oxford colleges.

the candidates into a *ranking order* (to produce a social welfare function, as we would now say). The existing law (the Royal Letter issued in 1746) ordered that the ordering of candidates should be based solely on votes. It did not, however, specify *how* the votes were to be counted when there were more than two candidates. At the University of Helsinki the practice, criticized by Lindelöf, was the following. Each voter should put the candidates in a ranking order. The candidate with *most first-preference votes* received the first position in the final proposals while the second and the third positions were determined by pairwise majority comparisons.

Lindelöf maintained that the existing practice was illogical, for it actually combined *two* separate methods of vote-aggregation. First positions in the final nomination proposals were determined by the first-preference votes; in effect, the used criterion was the plurality ("relative majority"). In contrast, second and third positions were based on the majority comparisons applied to entire preference orderings. These methods were based on different, mutually incompatible principles. Moreover, both methods had their own inherent defects. The plurality method might well deliver the first position to a candidate considered as the *worst* by a majority of voters (this problem is nowadays called the Borda Paradox, see Sect. 3.2.2). The pairwise majority method might lead to a situation in which candidate *a* is judged as better than candidate *b*, *b* better than *c*, and *c* better than *a* (a problem nowadays called as the Condorcet Paradox, see Sect. 3.2.5). The best method was, according to Lindelöf, a voting-method in which the voters gave three votes for the candidate they considered as the most worthy, two votes for the second and one vote for the third. All the votes were summed up; the candidate with the largest sum total would receive the first position, the candidate with the second largest total the second position and the candidate with the third largest sum the third position in the final nomination proposal. In effect, Lindelöf advocated the system known as the *Borda rule* (or the Borda count; see Sects. 3.1.4, 3.2.2, 3.3.2 and 3.3.3). He did not present it as his own invention: while he might have known J. C. de Borda's article in which the method was proposed, his authoritative source was the work of the great French astronomer and probability theorist, Pierre-Simon Laplace.

There was an obvious counterargument, fully utilized by Lindlöf's opponent, Snellman. What reasons there were to assume that the distances between the candidates would be *equal*? Consider the case in which there are three candidates, *a*, *b* and *c*. One voter may think they are all almost equally worthy; another may think that while *a* and *b* are very close to each other, *c* is definitely inferior; a third voter may judge the candidate *a* outstanding while *b* and *c* are both equally bad choices. The method recommended by Professor Lindelöf would automatically assume that the distance between *a* and *b* would be the same as the distance between *b* and *c*. In other words, the proposed method allocated fixed weights (3, 2, and 1) to the votes. This looks arbitrary. Lindelöf's reply is twofold. First, *all* voting methods are based on some, often unarticulated, assumptions. For example, the plurality rule used in determining the first positions in nomination proposals was based on the assumption that the distances between voters' first choices and other choices were *infinite* (that is, the weights are 1, 0, 0). Second, of all possible way to weigh votes, that used in the Borda rule was the one supported by the mathematical theory of

probability. If we have no knowledge of the respective probabilities of mutually excluding events, it was rational to assume that they were equally probable. When this principle (the Principle of Insufficient Reason, or Laplace's principle) was applied to the present problem, the Borda rule resulted. Indeed, Lindelöf argued that the superiority of the method could be proved on purely mathematical grounds.

In purely formal issues, the philosopher was no match for the celebrated mathematician. Indeed, Snellman had obvious difficulties in understanding the nuances of Lindelöf's arguments. Nevertheless, the philosopher's comments should not be ignored. Snellman's general argument was that "in the world of the Spirit"— that is, in social, political and psychological issues—mathematics is not a reliable guide. This sounds like anti-mathematical obscurantism, and it was so interpreted by Lindelöf. However, Snellman also had a valid point. Clearly Lindelöf overstepped the limits of mathematics by claiming that the superiority of his favourite voting rule could be "proved" by a mathematical argument, without any controversial non-mathematical premises. Ultimately, the question of the best voting method was a normative question which could not have a purely mathematical answer.

Snellman's second reply was more specific but equally interesting. Lindelöf's probabilistic argument for the Borda rule was based on the assumption that voters could *always*, at least in principle, put all the candidates in a definite (complete) ordering. Snellman challenged this assumption. It is quite possible that sometimes or even in most cases, the voters are actually not able to compare the respective merits of all candidates. Their merits may be strictly incommensurable. Nevertheless, the law requires that the voters *must* produce a collective ordering. The orderings are often artifacts produced by an institutional practice rather than faithful summations of pre-existing opinions.

Snellman was also able to make two objections of a more technical nature. First, the method proposed by Professor Lindelöf could result a collective ordering in which the candidate considered as the best by a strict majority (>50 %) of voters did not receive the first position. For Snellman, this was too much to stomach. Second, when Professor Lindelöf's method was used, a minority could defeat the will of the majority by voting in a *strategic* way, by ranking the majority's favourite candidate as the last in their rankings.[4] Ultimately, however, Snellman's unwillingness to accept Lindelöf's arguments may have been based on a political argument he did not dare to articulate openly. In 1862, Snellman was already an

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[4] When appealing to Laplace's authority, Lindelöf was either careless or less than fully honest. After presenting his argument for the Borda rule, Laplace (1814/1902, 128–129) actually wrote: "Without doubt it would be better if each voter should write upon his ticket the names of the candidates in the order of merit which he attributes to them. But particular interest and many strange considerations of merit would affect this order and place sometimes in the last rank the candidate most formidable to that one whom one prefers, which gives too great an advantage to the candidate of mediocre merit. Likewise experience has caused the abandonment of this mode of election in societies which have adopted it." The last sentence obviously refers to *Institut de France* which adopted the method but abandoned it in 1804.

experienced politician, 20 years senior to Lindelöf. His grand strategy as the unofficial leader and ideologist of the National movement was to defend and strengthen the Finnish institutions of self-government without openly challenging the Russian authorities. Any argument which was likely to undermine the legitimacy of the voting rules in general use might actually play to the hands of the (mainly Russian) nominating authorities.

Superficially, the nineteenth-century dispute could be read as just another instance of the breakdown of communication between the "two cultures". Nevertheless, in spite of the mutual incomprehension the mathematician and the philosopher were talking about the same issue, the best way to make decisions. They could have learned something from each other. Many of the arguments used in their discussion also appear in modern treatments of the social choice theory.

In our days, the social choice theorists doing formal work often claim that their results have philosophical relevance. This idea animated Kenneth Arrow's small monograph (1951/1963) which laid the foundations of the modern theory of social choice, According to another prominent theorist, Jerry Kelly (1988), the theory of social choice has at least two important functions:

> For one thing, social choice theory has a very practical side in aiding selection a procedure for many choices by political or social organizations. (...) But its potentially most important side is in allowing us to make real progress in answering some of the oldest questions of political philosophy.

However, numerous writers, both formal theorists and philosophers, have complained about the lack of communication between the disciplines. Thus Thomas Christiano (a philosopher) admitted that "we have philosophized relatively little about the implications of social-choice theory for political philosophy" (Christiano, 1990, 152). William Riker (a political scientist and social choice theorist) concurs: "Political philosophers, engaged in the pursuit of justice, have ignored and neglected the theory of voting methods" (Riker, 1982, 1), while Amartya K. Sen (an economist and social choice theorist) puts the burden on the shoulders of the formalists:

> The language of social choice theory—though precisely formulated—has tended to be rather remote from the standard language of social and political philosophy, and the skill of the social choice theorist in obtaining technical results has not been quite matched by the inclination to discuss the issues of interpretation. (Sen, 2002, 395)

Thus, the problem of communication, illustrated by the nineteenth-century dispute, has not disappeared anywhere.

The present work is a philosopher's attempt to build a bridge between the two disciplines. It is simultaneously an attempt to convince democratic theorists that the theory of social choice should be taken seriously, and an attempt to convince the theorists of social choice that there are genuine philosophical problems related to their discipline. I think that the two issues mentioned by Kelly, choosing good institutions and making progress in political philosophy, are interrelated. Social choice theory can guide us in choosing good procedures only when we have found answers to certain philosophical questions.

1.3 Democracy and Its Values

What is democracy? Clearly, the term "democracy" has both evaluative and descriptive uses; democracy is a widely shared political ideal and, simultaneously, an institutional arrangement.

In order to be called democratic, an institutional system has to fulfill some minimum conditions. We may take John D. May's[5] (1978) definition as the starting point. May defines democracy as a "responsive rule", or, more precisely as a "necessary correspondence between acts of governance and the wishes with respect to those acts of the persons who are affected" This definition is actually quite close to the traditional definitions of democracy as "the will of the people" or "the self-government of the people". The key word in May's definition is "necessary"; if democracy were simply a correspondence between wishes and policies it would be compatible with government *for* people, not only with government *by* people. "Necessary" indicates here that the expressed wishes or preferences of the governed are regularly transformed into public actions. This is part of what we mean by *will*: wishes or preferences are effective, they make a difference, and they make difference partly *because* the one who has those wishes or preferences wants them to make a difference. Ian Budge (2005, 1) specifies: "What distinguishes real democracy is an institutional mechanism for ensuring the correspondence."

May's definition says nothing about the way in which people form their opinions or preferences. To take simple example: suppose that a political system allows people to choose only between two parties with almost identical platforms. The election results faithfully reflect the popular choice between these given alternatives, so there *is* the required correspondence between people's expressed preferences and the resulting policies. However, the system is not democratic in the relevant sense. A democracy must provide a real choice for the people; this presupposes that the options are formulated in a relatively open process. Moreover, May's definition does not specify how the—often mutually incompatible—wishes of the citizens are to be compared and aggregated. To *whose* wishes does the system respond and how? A better approximation of an adequate conception of democracy has to contain a procedural component which somehow specifies the connection between preferences and policies. Here, Michael Saward's amended version of May's definition is a step forward: Saward defines democracy as "necessary correspondence between acts of governance and the *equally weighed* felt interests of citizens with respect to those acts" (Saward, 1998, 51; my emphasis).

I propose a list of conditions necessary for a good or working democracy. Democracy is a system of governance in which there is a correspondence between acts of governance and citizens' preferences, and the correspondence results from a process which obeys the following constraints:

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[5] Not to be confused with Kenneth O. May, a social choice theorist and a historian of mathematics.

1. *Political equality*. In democratic decision-making, all members participating in decision-making are formally equal in the sense that all those individual acts legally counted as acts of participation have an equal impact in the decisions.
2. *Responsiveness* In democratic decision-making, citizens have the means to participate in an authoritative way so that their acts of participation have an effective, predictable impact in the decisions.
3. *Equal and effective liberty*. All decision-makers are equally entitled to express their opinions, disseminate information, discuss issues, and to form groups, organizations and coalitions.

These three principles imply three further institutional requirements:

4. Equal control of agenda. Citizens have an equal right to propose alternatives and stand for election.
5. Popular sovereignty. At least most important decisions are actually dependent on an established procedure satisfying conditions (1)–(4).
6. Constitutional entrenchment. Principles (1)–(5) are not at the mercy of some actor or a temporary coalition of actors; not even at mercy of the democratic procedure itself. They are safeguarded by formal and/or informal norms which cannot be overturned by a simple decision.

These six conditions specify John D. May's "necessary connection". The conditions themselves are relatively transparent. Condition (2) is needed in order to distinguish practices of decision making from practices of mere consultation or codetermination. "Democratic leadership" in which a leader makes all the decisions after consulting her subordinates and by trying to incorporate their interests and opinions into his final decisions is not democratic, if the subordinates do not actually determine the content of the decisions and are not responsible for them. Condition (3) is equally necessary, for acts of participation are supposed to reflect free choices of participants, based on their interests and opinions, and one necessary condition for free choice is the freedom of opinion. Condition (4) excludes one-party systems and manipulated plebiscites in which voters are formally equal but forced to choose between alternatives dictated by somebody else. The sovereignty condition (5) excludes systems in which democratic decision-makers have to share their power with some other, non-democratic decision makers. The democratic process is supreme, although not omnipotent. The constitutional condition (6) guarantees that the other procedural elements of democracy are not dependent on someone's (say, the colonial rulers') good will. It also ensures that the other conditions cannot themselves be abolished by a simple democratic decision. It does not require, however, that there is a written constitution or a Bill of Rights. An unwritten constitution may sufficient if it effectively constraints the decision-makers.

The egalitarian condition (1) needs a further explication. The idea that democracy requires political equality is an essential part of the received notion of democracy (for example, Aristotle in *Politics* 1291a). "Democratic equality" consists of (at least) two separate principles. The first is the principle of *maximal*

inclusion. Generally, a principle of inclusion determines who is and who is not entitled to participate in decision making. In the modern democracies the group which is entitled to participate—by voting or by running for an office—consist of all the citizens, and the citizens of country are all the adult persons living permanently in that country. Second, the *rights to participation* should be equal among those included. One important application of this principle is equality among voters: every voter has only one vote, and all the votes are of equal value. This principle is satisfied only approximately in modern democracies. In most countries, the members of parliaments and senates are elected from numerous, separate constituencies, and the representative-voter—ratio varies from a constituency to a constituency. Nevertheless, a rough equality of votes is a characteristic property of democracies and only of them (exempting the totalitarian show elections in which all the votes are "equal" in the sense of being equally worthless). The development of democracy in the Western world is largely a development towards more inclusive and egalitarian principles of participation (see Sects. 2.1.1–2.1.4). Although there have been coups and revolutions in democratic states, in the twentieth century no democratic state has peacefully returned to less inclusive or less egalitarian practices (Colomer, 2001, 44–46).

There seems to be a wide consensus on conditions like (1)–(6) (see, for example, Bobbio, 1987; Dahl, 1989, 108–114; McMahon, 1994, 134; Saward, 1998, Ch. 3). However, some conditions which often included to even the most minimalist conceptions of democracy are left out of the scheme. For example, there is no reference to political competition (Schumpeter, 1942/1962), alteration of governments (Przeworski, 1999), or, most strikingly, to the majority rule (Dahl, 1956, 1989), all included to the definition of democracy by authors who share the institutionalist framework adopted here. These omissions are intentional. Political competition and alteration of governments are empirical consequences of democracy rather than parts of its definition. Later, I shall argue that in the conditions of the modern state, the principles of equality and of responsive rule actually imply extensive use of the majority principle in democratic decision making. However, I take the majority principle as something that should be argued for, not taken for granted. I do not want to exclude alternative rules, for example the unanimity rule, by a definitional fiat. *A fortiori*, there is no reference to substantive political values like justice, the common good, or equal treatment of interests. These are typical aims (and possible results) of democratic politics; sometimes they may be its preconditions. But democracy itself should not be understood in terms of such substantive values.

1.4   The Contents of This Work

The main purpose of this book is to discuss the most important political and philosophical interpretations of the basic results of the theory of social choice—most notably, those put forth by such social choice theorists as William Riker,

Amartya Sen, Don Saari, Michael Dummett, Keith Dowding, Anthony McGann, Christian List, and Nicholas Miller, and by such philosophers and political theorists as Philip Pettit, Robert Goodin, David Estlund, Charles Beitz, Thomas Christiano, David Miller, Albert Weale, Ian Budge, Torbjörn Tännsjö, Gerry Mackie and Jerry Gaus. The issues are occasionally linked to the problems dealt by the classics of political theory, for example by Aristotle, Samuel Pufendorf, Jean-Jacques Rousseau, Benjamin Constant, John Stuart Mill, Max Weber, Hans Kelsen, R. A. Dahl and Jürgen Habermas. I try to evaluate the plausibility of different interpretations of the main results and to find the links between the theory of social choice and the more traditional issues of political theory and philosophy (such as majority rule vs. minority protection, proportionality vs. majority/plurality, direct democracy vs. representation, popular sovereignty vs. judicial review, interest aggregation vs. deliberation, utilitarianism vs. rights). The theory of social choice may be useful because it sometimes helps us to see institutional problems in a more distinctive way.

   In this work, I have followed certain methodological and expositional strategies. I have tried to minimize the role of formalism: there are very few proofs and very little symbolisms. For a reader who is interested in the social-choice theory proper, this may be a disappointment. The emphasis of the book, however, is on interpretation of the theory: there are already numerous excellent introductory works for those who are interested of a more exact treatment of the issues. My aim is that the text could be read even by someone who has no previous knowledge about these theories and who has no particular interest to study them in detail. There is no royal road to geometry, but there are longer and shorter routes to it. In order to make things more accessible, I have followed the strategy I use in my teaching. When stating a principle or a general result, one should always provide an example, and a realistic example is always better than a fictional one. So this work is full of real-life examples. They make the text much longer, but, I hope, also more relevant for a reader who is interested in the real political life and who is wondering whether the social choice approach is actually able to tell anything about it.

   Unlike some philosophers (but like Aristotle, for example), I have always been passionately interested in facts. I do not believe that political and social philosophy can be done without an adequate knowledge of political facts. So there are plenty of facts in this work. Some are my own findings; most are taken from other works. I hope that most of the facts are correctly stated and that someone who is interested, for example, in various voting rules, their workings and their history, will find something relevant in this book.

   This book is *not* about "the economic theory of democracy". I try to avoid strong methodological commitments, such as a commitment to any version of the *homo economicus* model. For the sake of the argument, I accept the basic idea that political actors can be treated as rational in the sense that first, they are *purposeful* and second, that they can rank the available options at least as better or worse; in other words, they have *preferences*. It should be noticed that "preference" itself is a methodologically neutral term. In the context of this work, "preferring" means that in a given situation, the relevant actor can *rank* the feasible options, or at least are

able to classify them as "better" and "worse". Typically, these rankings are based on *reasons*. These reasons may be moral values, personal interests, collective interests that the actors represent, or, alternatively, on mere tastes. However, there is almost always a cognitive component involved: alternative x is preferred to alternative y because x is supposed to possess properties which make x preferable. I refuse, however, to follow the utilitarian route further than this. I do not, for example, suppose that political actors always try to maximize their expected utilities, or that they are self-interested, or that their interests can typically be identified with some measurable quantity such as money, or that an aggregation of their subjective utilities provides a meaningful normative standard. I happily express my agreement with the late William H. Riker (1982, 97): "It seems to me that many alternatives outside the economic sphere are unpriceable or, more accurately, incommensurate in value with other alternatives".

The critics of the utilitarian-rationalistic tradition may, in their turn, claim that I have already conceded too much. Even the assumption that people have something as "rational preferences" is doubtful. Many meaningful forms of human conduct should not be interpreted in terms of preferences. Rather, they should be interpreted in terms of norms and traditions, or of spontaneous expressions, or of subconscious motivations. My reply to them is this. It is *not* a part of the universal human nature that we are able to form rational preferences and act according to them. "Rational preferences" are formed in particular *institutional* contexts. For example, in competitive markets, firms are under pressure to act "rationally". In politics, elected representatives may be required to compare various policy alternatives and to rank the alternatives from the most-preferred to the least-preferred. These requirements may apply more strictly to a member of a legislative committee than to an ordinary MP, and more strictly to an MP that to an ordinary citizen. "Rationality" is, then, a variable. In the context of the political institutions of the modern society, it is often reasonable to start from the hypothesis that people try to be rational in this restricted sense, and to see what happens.

Sections 2.1–2.1.5 provide a brief history of voting and collective decision-making. It is basically a story about the triumph of the majority rule. The most interesting, albeit often neglected aspect of the story is of a more general nature: How and why people did came to accept the authority of *any* purely mechanical procedure—be it the simple majority-principle, a two-third rule, or something else? In our individual decision-making, we do not normally rely on purely mechanical procedures. Why accept their authority in public contexts? This is not just a historical problem. Rather, as I try to show later, most important theoretical disputes on the nature of democracy are related to this issue.

In Sects. 2.2.1–2.2.4 I present the most elementary result of the social-choice theory: the so-called May's Theorem. I try to show how, contrary to some claims, it captures at least part of the idea of political equality. May's theorem, unlike most of the famous theorems of social choice, is a *possibility* theorem. It shows why the standard majority principle has a unique status among decision-rules when the number of options is two. In practice, decision-making in modern democracies usually takes an indirect form. This leads to the problem discussed by John Stuart

Mill: the majority will of the representatives elected by majorities may well be different than the will of the majority of voters.

In Sects. 3.1.1–3.1.7 I take up the problem first discussed in Aristotle's *Politics*: what is the proper interpretation of the majority rule when the number of proposals or candidates is *greater* than two? The theory of social choice actually begins here. Because May's Theorem cannot be generalized to such situations, we have a plethora of alternative decision-rules. I try to give a brief, historically informed description of voting rules which have actually been used in democratic states, or have been subjects of serious political discussion, or have some historical interest. Many innovative proposals of the modern theorists of social choice are mainly ignored. (The numerous works of Hannu Nurmi are recommended to the interested reader!) The great number of *prima facie* reasonable and fair rules gives rise to another problem, here called as Locke's problem. It is this: On one hand, if it is easy to change the rules of the game, those who have power over the rules may tailor the rules to their own advantage. On the other, if it is difficult to change the rules, it may become impossible to correct the existing injustices of the system. Because there are numerous competing conceptions of how a fair, reasonable and democratic procedure should work, it is almost always possible to justify manipulation (or inaction) by appealing to some general values.

In Sects. 3.2.1–3.2.6 and 3.3.1–3.3.5 I review the three most important answers to Aristotle's problem. They are interpretations of the "will of the people" (John D. May's "necessary correspondence") in settings with several candidates or proposals. One could argue that all real-life methods to choose a single proposal or candidate can be seen as realizations or as more or less good approximations of, or compromises between, the few competing criteria. In Sects. 3.4.1–3.4.6 the social choice criteria are applied to the institutions of direct democracy, In Sects. 3.5.1–3.5.9 I add still another criterion, that of proportionality. Unlike the other criteria, however, proportionality is linked, not only to the Aristotelian problem of multiple alternatives, but also to the Millian problem of the two-stage process of representation. I try to show why proportionality is compatible with majoritarianism in representative contexts.

In Sects. 4.1.1–4.3.6 the conditions used in the derivation of Arrow's Theorem and the related results are discussed. I go through all the conditions one by one. In the context of democratic decision-making all the conditions are *prima facie* plausible; many criticisms are based on mistaken interpretations. In Sects. 4.3.1–4.3.5 I focus the most controversial of all conditions, Arrow's Independence of Irrelevant Alternatives. I concur with the present majority opinion that the independence condition is too demanding; however, it has some intuitive support, and can be abandoned only with a price. One consequence of violating the independence condition is that strategic voting becomes feasible. In Sects. 4.3.2–4.3.6 the normative implications of strategic voting are discussed.

In Sects. 5.1.1–5.1.4 I describe the various philosophical interpretations of the theory of social choice following Arrow's seminal contribution. According to the most dramatic interpretations we have to face a choice between "dictatorship and democratic chaos". This view derives from a misunderstanding of Arrow's

conditions. In Sects. 5.2.1–5.4.4 I explicate and criticize the most influential interpretation of the social-choice results, William Riker's view that the great choice has to be made between "populist" and "liberal" interpretations of democracy. According to Riker, the social-choice theory actually shows that populism (not to be confused with the political movements labelled as "populist"!) is internally inconsistent, so liberalism remains as the only viable alternative. Riker's arguments are dissected one by one. I try to present Riker's arguments as well as the most important counterarguments as carefully as possible.

In Sect. 5.5.1 criterial and epistemic forms of "populism" are distinguished. The former identifies the "will of the people" with some electoral principle, while the latter sees democratic decision-making as searching for an independently existing truth. This was the alternative supported by Jean-Jacques Rousseau and Condorcet. Condorcet formulated the most important theoretical argument for the epistemic conception, the so-called Condorcet's Jury. In Sects. 5.5.3–5.5.5 I try show that the approach based on the Jury Theorem is based on an implausible interpretation of voting, and it cannot actually justify our democratic practices.

The deliberative theory is a version of the epistemic view which has become popular among the political philosophers. In Sects. 5.5.6–5.5.8 I briefly review the strengths and weaknesses of the background theories. Deliberative theorists often accept the epistemic interpretation of collective decision-making, as well as the regulative ideal of rational consensus. However they also admit the practical need for making majority decisions. The resulting tension is analysed in Sect. 5.5.8 and, again, in Sects. 5.6.1–5.6.3. In epistemic theories political decision-making is conceived as acceptance or rejection of propositions. Philip Pettit and Christian List have shown how the paradoxes of social choice persist even after this redefinition. The results proved by Pettit, List and others show that even when all voters are rational (in this sense) collectives may accept inconsistent or incomplete sets of propositions. Pettit argues that these results support his republican conception of democracy. In 5.6.1–5.6.3 I discuss Pettit's arguments and compare them with those of Riker.

The post-war pluralist theorists of democracy argue that modern democracies are characterized by switching majority coalitions and negotiated compromises. These switching coalitions increase stability, and make the traditional problem of "majority tyranny" less relevant. In Sects. 6.1.1–6.1.4 some theorists of democratic pluralism are discussed. In Sects. 6.2.1–6.2.8. I first introduce two less-known "paradoxes" of social choice, the Ostrogorski Paradox and the Anscombe Paradox. Then I try to show how these two problems are related to two perennial problems of political theory and of institutional design, namely the choice between direct and indirect forms of democracy and the choice between issue-by-issue decision making and compromises. Ultimately, these are responses to the problem of pluralism. The comparisons show that the social choice framework may be helpful in analysing the traditional (non-technical) problems of political philosophy.

In Sects. 7.1.1 and 7.1.2 I start by assessing the empirical evidence about the social choice paradoxes, especially the evidence about the Condorcet Paradox.

I discuss briefly the possible reasons of the paucity of the empirical evidence. Then, in Sects. 7.2.1–7.2.14, I compare two real-life political institutions: The traditional Finnish presidential election system which was in use from 1925 to 1988, and its US-American counterpart. For several reasons, the two Electoral Colleges provide an interesting subject for applied social choice—most importantly, their purpose is to make only one single decision which may nevertheless have tremendous political consequences. By using historical sources, I try to show that the history of the Finnish Electoral College exhibits two, perhaps three instances of the Condorcet paradox, and provides dramatic examples of the effects of strategic voting. In contrast, in the US Electoral College there are no instances of the Condorcet paradox, for the unit-rule version of plurality tends to produce unambiguous majorities. This is acquired at a cost: the US system of electing the College violates the Arrovian independence and path-independence conditions far more often than the proportional Finnish system. For this reason, the connection between the distribution of the popular vote and the composition of the College is very weak. Both the US and the Finnish system may exhibit quasi-chaotic behaviour—"chaotic" in the sense that very small, unpredictable perturbations may sometimes change the outcome. This is one consequence of Arrow's theorem.

Chapter 8 tries to pull the various threads together. While the theory of social choice does not force us to face a dramatic choice between "dictatorship and democratic chaos", or between "liberalism and populism" it is able to reveal several trade-offs between democratic values. This work does not provide a grand theory. However, the social choice results are potentially relevant for the discussion on the virtues and vices of different real-life democratic mechanisms. Sometimes it is able to show that the problems have no "solution", rather they should be seen as *trade-offs* between different values embodied in democratic institutions.

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Chapter 2
Majority Decision

2.1 A Short History of Social Choice Rules

Two institutional solutions characterize modern state-wide democracies. First, most decisions are actually made, not by all the citizens, but by elected representatives. Second, the method used by the representatives in their deliberations is (typically) some version or extension of majority rule.[1]

Neither representation nor the majority principle follows self-evidently from the general democratic principles. In modern democracies, however, the support of a majority is invariably taken as a necessary condition for the legitimacy of decisions. As Elaine Spitz says, "the application of this principle is at the centre of Western democracy: it is at the root of the claim of political decisions to be regarded as worthy or legitimate". Most theorists of democracy have regarded the application of majority rule at some level of decision-making as a conceptually necessary component of democracy (see, for example, Dahl, 1989, 135; Kelsen, 1945, 285–286; Krabbe, 1930, 75–78; Spitz, 1984).[2] This view is shared by the politicians as well as by the general public. To take a concrete example, in Malta, 1981, the electoral system delivered a parliamentary majority to the Malta Labour Party, although the party received only 49.1 % of all valid votes. Its competitor, *Partit Nazzjonalista* (PN), got 50.9 % of the votes but a minority of the seats. The result produced a serious crisis of legitimacy. The representatives of the PN refused to take their seats and accepted them only in 1983 when the parties agreed to amend the constitution so that the emergence of a "false majority" was prevented. The missing 1 % deprived the Labour Party of the legitimacy of its victory. But why? Why is it that the majority support—in the most extreme case, the support of half the voters plus one—makes all the difference? And, behind this, there lies a more fundamental

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[1] On the history of the majority principle in general, see: Baty (1912); Heinberg (1926); Heun (1983); Konopczynski (1930); Moulin (1953).

[2] For an opposite view, see Lijphart (1991) and Hyland (1995).

question: Why accept the authority of *any* purely numerical rule? There is something deeply disturbing in the idea that a purely mechanical, content-free procedure could determine what we should do. After all, we do not apply such procedures in the making of private decisions; why should such a procedure be decisive in our collective life?

2.1.1   Decision-Making in the Church

In *On Revolution*, Hannah Arendt claims that "the principle of majority is inherent in the very process of decision-making" and "is likely to be adopted almost automatically in all types of deliberative councils and assemblies". In a similar vein Thomas Jefferson considered *lex majoris partis* as "the natural law of every assembly of men whose number are not fixed by another law" (1784/1944, 243). Jefferson might have got this view from Grotius, who took it as axiomatic that "the majority would naturally have the right and authority of the whole" (1625/1853, II.5.17). This belief in the naturalness of majority rule is common but not historically accurate.[3] Majority rule is a part of the specific tradition we have inherited from the Greeks. Later, majority rule was adopted by the Roman assemblies and then, slowly, found its way into Canon Law. If any decision-rule could be called "natural", it is the unanimity rule, not the majority principle. In the old Nordic and Germanic *ting*, in the Iroquois Confederation, in the interpretation of Islamic Law, and in East Asian and African village meetings the typical decision-making rule was (and is) unanimity or consensus (Konopczynski, 1930, 11–18; Urfalino, 2006).[4] Heun (1983, 60–66) states that unanimity survived as an ideal (if not always as a practice) in several Continental representative bodies up to the eighteenth century. The Italian medieval republics and clerical assemblies used qualified-majority requirements. And even the Greeks used an alternative decision-making

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[3] In an interesting article Hastie and Kameda (2005) argue that the majority rule is psychologically salient as well as practically effective. They claim that the rule is popular "across the full spectrum of human groups from hunter-gatherer tribal societies to modern industrial democracies" (pp. 494, 495). However, the sources mentioned by them do not actually give much support to the claim that the rule has been popular among hunter-gatherers, although they present some real evidence that many non-human animals living in packs do follow "majorities".

[4] Philippe Urfalino (2006, 2007) has remarked that the version of unanimity used in many non-European and pre-modern European assemblies should be characterized as the rule of *apparent consensus* rather than that of formal unanimity. Under apparent consensus, there is no separate stage of voting and no formal veto-rights. Instead, issues are discussed and negotiated, and the process continues until there is no open disagreement. There is no well-defined default rule: if an agreement cannot be reached, decisions are postponed or transferred to another body. Sometimes, stubborn minorities are simply excluded from further discussions or forced to submit by informal coercion. Such a rule should be distinguished from the formal veto—rule used in international congresses of the States or in the seventeenth and eighteenth century Polish *sejm*.

rule that was conceived of as equally essential for democracy as majority rule: the drawing of lots.

In practice, both consensus and majority rule have always been combined with various hierarchical principles. Melissa Schwartzberg (2014) argues that the practice of exact *counting* of votes has aristocratic roots. According to her, its original purpose was to assess the independent votes of those, and only of those, who possessed the special faculty of political judgment, such as the members of the Spartan council of elders (*gerousia*) and of the Athenian *areopagos*. Voting had an epistemic function, but only when it was practiced by those who were wise—and *equal* in worth. The masses, lacking the developed faculty of political judgment, expressed their public sentiments by shouting or waving hands in large meetings. Their individual preferences were not considered worth counting exactly; a rough estimate was thought sufficient to reveal the present mood of the people. The practice of vote-counting in general assemblies developed in democratic Athens. But even there, it was mainly restricted to circumstances in which preserving independence of judgment was paramount, such as jury trials (Schwartzberg, 2014, ch. 2.). After the fall of Rome, the practice of vote-counting lost its significance, and was more or less forgotten.

For centuries, the Catholic Church was the most organized political institution in the Western World and the preserver and transmitter of the intellectual and political heritage of antiquity. Moreover, its offices could not (legitimately) be inherited, bought, or acquired through military superiority. Nevertheless, in the Medieval Church there was no consistent and generally accepted method of making decisions or electing superiors. In the early history of the Church, decisions were occasionally made by using the simple majority rule (Monahan, 1987, 136). Generally, however, the ideal of unanimity prevailed and disagreement was seen as a defect, a sign that the Holy Ghost was not present. *In scisura mentis Deus non est*, as Gregory the Great (Pope 590–604) said. Therefore the Church Councils should seek universal consensus. But unanimity was not always attainable. In the sixth century, St. Benedict introduced the rule that in cases of a disagreement, '*major et sanior pars*' ('greater and wiser part') of the relevant assembly should decide. This formula was enforced by the Lateran Council in 1179, and it remained in the canonical law up to 1917. Until the fourteenth century, *sanioritas* or reasonability of an opinion could override mere numerical superiority. The *sanioritas* of an opinion was deduced from *auctoritas* (the external attributes of the supporter of an opinion), from *meritum* (the advantages and merits of voters and candidates), and from *zelus* (their motives). At the end of the twelfth century, the canonist Huguccio proposed a more precise interpretation. The number, the *auctoritas* and *zelus* of the supporters of an opinion should be treated as equal; if two of the criteria were in agreement, they would together override the third (Pennington, 1995, 451). In all subordinate bodies minorities had, thus, a loophole. A minority could always appeal to the superiors, arguing that, although it was *pars minor*, it was nevertheless *pars sanior*, so that a superior could legitimately change a decision made by the majority. The role of majority rule was that it created a *presumption* for the majority

opinion: *pars minor* had to prove that its opinion embodied *sanioritas* (Heinberg, 1926, 60; Moulin, 1953, 123–126).

As Burns (2003, 70–71) says, the assumption of equality was not an easy or 'natural' assumption in most medieval situations. In pervasively hierarchical societies it was much commoner to make the contrary assumption: to assume that some people's views were entitled to carry more weight than others. Thus, at the end of the thirteenth century William of Mandagout argued that electors who were either more numerous, older, or more dignified were likely to have better motives (Théry, 2001, 670). However, these criteria might still point to different directions. As the leading historian of the subject, Leon Moulin comments: "The meaning of the expression *sanior pars* has been disputed by canonists and theologians for six centuries without, of course, any agreement being reached: the attempt to 'saniorise', to qualify, the principle of the vote has therefore failed" (Moulin, 1965, 38). The problem was most acute in bodies that had no formal superiors. Popes asserted their supremacy over all decisions made in the Church; but there was at least one decision that could not be submitted to them—the election of a new pope. In papal elections, a regular practice was badly needed; in the years between 1000 and 1200, there were no less than 12 "antipopes", claimants whose claim to papacy was not generally recognized. Theoretically, the choice was supposed to be a unanimous one. Unanimity in papal elections was decreed by Emperor Honorius in 420; and as late as 1059, Pope Nicholas II confirmed the requirement. When unanimity could not be reached, the final choice was sometimes delegated to a small commission (*compromissum*) which could be authorized to use less restrictive decision-rules. In some capitulary elections, the task of the commission was to judge who formed the *sanior pars*. But the commission itself had to be elected unanimously.

The first Pope who was not elected unanimously was Innocent II (1130). After the death of his predecessor, a hastily assembled meeting elected him unanimously, but 23 cardinals, who were not present at the election, elected an antipope who also enjoyed the support of the Roman nobility. Finally the schism was submitted to St Bernard, who declared Innocent II to be the Pope, by appealing to the *sanioritas*–rule. However, a saintly authority was not always available. In practice, it was gradually accepted that "considerable majorities" did not need to justify the reasonability of their opinions. This practice was then specified as a two-third majority rule. A decretal issued by Alexander III in 1179 required a two-third majority for the election of Popes.

> Moreover, if anyone is elected to the office of pope by fewer than two-thirds—unless greater concord is attained, he shall by no means be accepted, and shall be subject to the aforesaid penalty if he is unwilling to humbly abstain. From this, however, let no prejudice to the canonical and other ecclesiastical decrees arise, with regard to which the opinion of the greater and the sounder part (*maior et sanior pars*) should prevail; for when a doubt arises with regard to them, it can be defined by the judgment of a higher power. But in the Roman Church, special decrees are made because recourse cannot be had to a higher power. (Quoted from Colomer & McLean, 1998)

Thus, the cardinals were considered as equals. In other clerical elections practices varied, but in the course of time, the majority principle gained ground. Some monastic orders, especially the Dominicans, applied the simple majority rule. In the early thirteenth century, Johannes Teutonicus argued, against Huguccio, that numbers should always prevail in decision-making, unless the numerical difference was very small ("*Numerus prevalet zelo et auctoritati, nisi numerus in modico execederet, tunc conferrem zelum vel auctoritatem cum numero*", quoted from Pennington, 1995, 451). Of the Popes, Innocent IV (Pope 1243–1254) referred to "considerable majorities" and the Council of Lyons (1274) extended the two-third principle to other capitulary elections (Moulin, 1953, 130). In his decree *Ubi periculum* (1274) Gregory X confirmed the principle that '*non zeli ad zelum, nec meriti ad meritum, sed solum numeri ad numerum fiat collatio*' ('not zeal to zeal, or merit to merit, but solely numbers to numbers are compared').[5]

Although the two-third majority-rule in papal elections was more effective than the unanimity rule, the election process was slow. In 1216, 1241, 1243, 1261, 1265 and 1268–1270, it took several months, sometimes years, to reach a decision (Colomer & McLean, 1998, 12). This led to the establishment of the conclave:

> When the cardinals found themselves face to face with [the situation where the 2/3 majority was not obtained] on the death of Clement IV in 1268, they commissioned six cardinals as plenipotentiaries to decide on a candidate. The vacancy of the Holy See had lasted for two years and nine months. To prevent a recurrence of this evil, the Second Council of Lyons under Gregory X (1274) decreed that ten days after the pope's decease, the cardinals should assemble in the palace in the city in which the pope died, and there hold their electoral meetings, entirely shut out from all outside influences. If they did not come to an agreement on a candidate in three days, their victuals were to be lessened, and after a further delay of five days, the food supply was to be still further restricted. (Fanning, 1911, 456–457; for a detailed history, see Herde, 1985)

The role of the conclave is (to use the modern economic terminology) to hasten the process by increasing the negotiation costs. This superb piece of institutional design worked effectively: in 1276 the election took only 1 day. However, the subsequent popes suspended the application of conclave, and long delays reappeared. In 1292–1294, the election again took 27 months. The new pope, Celestine V, re-established the conclave rules of Gregory X.[6]

Up to the sixteenth century, many canonists still defended the *sanioritas* requirement and the use of *compromissum* in clerical decision-making. In closed vote followed by counting (*scrutinium*) many difficulties were involved. The membership-criteria of decision-making bodies were not always well established,

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[5] Moulin ascribes this phrase first (Moulin, 1953, 127) to Gregory X and then (Moulin, 1958, 514) to Boniface VIII.

[6] This did make the process smoother but not necessarily less complicated. For example, in 1740, Pope Benedict XIV was elected in the 225th ballot. John Paul II was the next pope who changed the rules: he ordered that, after 33 unsuccessful ballots, a simple majority was sufficient for election. However, in 2007, Benedict XVI reversed the amendment and restored the old two-thirds rule.

and the possibility of fraud could not be ignored. According to Baty (1912, 21), the first modern instance of majority rule in Councils of the Church was at Pisa in 1409. But its legitimacy was still in doubt. At Basle (1437), the question arose as to whether the Council deciding on the union with the Greek Church should be held in Savoy or in Italy. The majority appealed to their numbers, the minority to their reasonableness. This disagreement led to a deadlock. Finally the Pope confirmed the minority outlook. The Council of Ferrara, immediately convened by the Pope, decided that only a two-third majority would be conclusive. Moreover, the council sat in three orders—bishops, abbots and doctors—and unanimity of the orders was required. In the medieval Church, there were, then, at least four competing principles: the ideal of unanimity, the qualitative principle that the opinion of *maior et sanior pars* of an assembly should prevail, as well as the two numerical requirements: the simple (absolute) majority, and the two-third majority requirement.

The Council of Trent (1545–1563) affirmed definitively the simple majority principle; the justification was that a majority opinion was presumed to embody the required *sanioritas*. The closed ballot was made obligatory; thus it became impossible to estimate the authority or merits of the voters. However, "points of doctrine" could be established only by "considerable majorities" (presumably, the two-third), while "points of reformation" could be established by narrow majorities. This caused endless disputes as to what were "points of doctrine" and "points of reformation" (Baty, 1912, 22–23).

2.1.2   Majority Rule in Secular Decision-Making

In secular decision-making bodies, the movement towards the full adoption of majority rule was even slower than in the Church. For the elections of kings among the Franks, Carolingians, Poles and Hungarians had been based on unanimity; and, as in the Church, this often led to a deadlock, thus making the hereditary principle more attractive. According to Heinberg (1926, 61), in institutions other than the Church, the general tendency of the later part of the Middle Ages was towards the progressive acceptance of the majority principle, with the principle of unanimity maintaining a stubborn resistance. The medieval Italian republics had very elaborate voting rules, but they invariably required qualified majorities, often combined with lotteries (see below). The first secular bodies using the simple majority principle were private corporations. According to the principle derived from Roman law, a decision made in a corporation was binding if all members were summoned, two-thirds of them attended and more than a half supported the decision.

Íslendingbók mentions the use of the majority rule in the twelfth century Icelandic parliaments, and the rule was also used in the thirteenth century elections of German kings. The thirteenth century Swedish land-laws gave the parishes the right to choose their ministers—thus violating the canon law—and at least some of them determined that in a case of disagreement, the opinion of the most numerous

party should prevail. In most cases, however, the majority principle was seen as an auxiliary procedure, to be used in exceptional circumstances as an imperfect substitute of full unanimity. Quite often, the minority was required to express its submission to the decision by a separate act, thus transforming the real disagreement to a symbolic agreement. As late as the early seventeenth century, a majority election of a member of the House of Commons could be confirmed by a second, unanimous election, in order to ensure that the choice was made in "*unanimis assensibus et consensis*" (Hirst, 1975, 75).

Formally binding versions of majority rule were first seen as an appealing procedure in bodies (such as the Church Councils, the cardinals' collegium, or the late medieval republics) that did not recognize any formal superior able to judge the "wisdom" of opinions. Historically, the most influential version has been the clerical two-third-rule; the first recorded instance of its use is from Lucca, AD 720. Qualified majority rules developed in the medieval Italian republics. In Genoa, the choice seems to have been a unanimous one; in Asti, Brescia, San Marino, Ancona, and Irvria, a two-third vote was required. Requirements in other republics were: Bologna, 27/40; Florence, 4/5; Bellona, 3/4; Reggio, sometimes even 999/1000; and still in other cities, 4/7 (Heinberg, 1926, 58; Konopczynski, 1930, 39–40; Marongiu, 1949/1968, 212; Moulin, 1953, 112–113).

However, most representative bodies outside the Italian republics were not sovereign decision-makers, and the status of their decision-making procedures was more or less unclear. For example, Alfonso V enforced the *sanioritas* principle in the Sardinian Parliament in 1446—but there was no norm or precedent saying what it might mean in practice (Marongiu, 1949/1968, 139). Usually, these bodies consisted of two, three, or four chambers or estates. The members represented corporate groups, and were often tied by the views of the corporations. Thus, there were two parallel problems: how the individual estates made their decisions, and how these decisions were combined as the decision of the whole body.

Quite often, consensus was the official requirement, while the actual practices varied. Outside the Church and the Italian city republics, decision-rules remained informal and imprecise up to the late seventeenth century. In the absence of unanimity, majority rule was used as an auxiliary principle. The *sanioritas* principle was occasionally used by submitting disagreements to an outside arbitrator, and sometimes the unanimity requirement was circumvented by referring controversial issues to separate committees who could apply less restrictive decision-making rules (Bardach, 1985, 52–53; Brotherus, 1948, 33–34; Gil, 1993, 115–116; Gueneé, 1985, 182). In the Aragonian Cortes, the unanimity principle (*nemine discrepante*) was followed, with varying degrees of rigour, up to 1592, when the king finally imposed majority rule. In France, Brabant, Holland, Sardinia and Sicily, unanimity between the orders was required but decisions were made within every order by a majority vote. Philip II tried to establish the majority rule between the orders in Sicily, too, but the estates resisted the new rule (Gueneé, 1985, 183; Marongiu, 1949/1968, 134, 139). In Valencia and Catalonia, only the estate of the nobles used the unanimity rule, which made the procedure smoother than in Aragon (Myers, 1975, 64–65). In the Polish Diet (*sejm*), by contrast, the conflict between the king

and the nobility led to the establishment of a strict unanimity rule, the *liberum veto*, as a constitutional norm that survived to 1791, reducing the Diet to almost complete passivity. Because of the unanimity rule, between 1652 and 1764 no fewer than 53 Diets assembled without passing a single law. The new constitution, accepted in 1791, established majority rule, but it came too late to save the country from partition.

Federal bodies typically relied on methods other than pure majority rule. Both the Dutch Republic and the Swiss Confederation consisted of relatively independent units. Each member-state had one vote, and their representatives were strictly bound by their constituencies. The Dutch *Staten-Generaal* required unanimity in the most important matters (taxation, issues related to war and peace), although, again, this practice could not always be followed. The President of the *Staten-Generaal* changed every week, being chosen in turn from each province. The smaller State Council could make majority decisions, and there, the large provinces had more votes than the small ones. However, the State Council remained weaker than the *Staten-Generaal* (Forsyth, 1981, 38). Similarly, the Swiss Confederation made its decisions on a unanimity basis—quite often, united action was virtually impossible, even in wartime (Myers, 1975, 92, 128). The members of the Confederation never recognized the full validity of majority rule, but, after 1515, majority decisions were used in issues that concerned all the members. Interestingly, both the Swiss and the Dutch applied majority rule at the local level.

In the Empire, the majority election of the Emperors was established in the Diet of Rhens (1338) and confirmed in the Golden Bull of Charles IV (1356). However, the ideal of unanimity remained prevalent in the *Reichstag*. Roháč (2008) links the famous Polish unanimity rule to the religious divisions which threatened the unity of the country, and confessional disputes may also explain its persistence in the Swiss Confederation and in the Empire. For example, in the Protestation of Speyer in 1529, the Protestant Estates refused to follow the Catholic majority and claimed exemption in religious matters. Although, in modern terms, the question was about rights, the Protestant Estates did not put the question in that way. Rather, they appealed to the unanimity principle as well as to the qualitative principle; the majority decisions were not considered binding because "*die vota nit ponderirt sonder numeriert warden*" ("the votes were not weighed but only counted"; Schulze, 1986, 52).[7] Finally, majority rule was formally established in the *Reichstag* in 1667—but the authority had already passed to the individual *Länder*. As in Aragon and in Denmark, the princes themselves encouraged the *Landtage* of the German states to take decisions on a majority vote which they might then impose on the dissenters (Heun, 1983, 52–53). Much later, the *Bund* of the German

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[7] This complaint was common in those days. For example, when Andrew Melville, the Scottish reformer, refused to acknowledge a decision made in the presbytery of St. Andrews in 1591, he stated "*quod suffragia essent ponderanda, non numeranda*" (that votes should be weighed, not counted) (MacDonald, 2010).

states (1815–1866) still required either a two-third majority or unanimity for the decisions made in its Plenary Assembly.

In the medieval and early modern representative bodies, consensus-building was often a complex process, and there were various methods of creating the required unanimity. Colomer (2001, 78) describes the process in Catalonia in the following terms:

> Unanimous agreements were laboriously constructed in the Catalan Corts in several ways, including deliberation; lengthy negotiations within each of the Estates, between solicitors of different Estates, and between solicitors of different Estates and the King; by attracting voters to the bandwagon in public and ordered voting rounds which started with the higher or 'sanior' parts, and by bribes from the King offering jobs and money for the dissenters.

Similarly, the Estates of the Duchy of Prussia deliberated in a predetermined order: first the highest estate (*Herrenstand*) considered the proposals of the Duke; it then passed its conclusions on to the second estate (*Ritterschaft und Adel*, the lower nobility). If the two noble estates agreed, they sent their joint conclusion to the third chamber. Thus, the higher estates put pressure on the lower to agree with the decisions; the order of deliberation reflected the hierarchy of Prussian society (Małłek, 2005). The practice of *prima vox*, the right of the most important decision-makers to express their preferences first, was an important element in the consensus-building.

2.1.3   Political Theory and Majorities

For those used to living in hierarchically-organized societies it was difficult to accept equality in political contexts. Political inequalities were expected to reflect general social inequalities. Political equality emerged only with the modern notion of citizenship. To quote Barbalet (1988, 2) "In the modern democratic state the basis of citizenship is the capacity to participate in the exercise of political power through the electoral process". But people were also reluctant to accept the authority of *any* purely mechanical and quantitative procedure. The medieval and the early modern theorists interpreted decision-making in *epistemic* terms. In this view the aim of all collective decision-making is not to solve interest conflicts but to find out the truth of a proposition (for example "Is this the right policy or not?"). Decisions should be made according to the rule that maximizes the likelihood of reaching the correct answer.

The epistemic conception of decision-making had its roots in the theories of Plato and Aristotle: Plato's *Republic* is a paradigm for the foundation of political authority on superior knowledge.[8] This view was usually connected with an unequal distribution of the decision-making power. Decisions should be reasonable, and there seems to be no guarantee that reasons would lie in numbers. Thus Pliny

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[8] On Plato's argument, see *Crito* 47c–d2, *Gorgias* 463d1–465e1, *Republic* I 341c4–342e11.

the Younger complained in his letter to Maturus Arrianus, how "votes are counted, their value is not weighed, and no other method is possible in a public assembly. Yet this strict equality results in something very different from equity, so long as men have the same right to judge but not the same ability to judge wisely". In his *An Examination of the Political Part of Mr. Hobbs his Leviathan* (1657), the English political theorist George Lawson presented the basic problem involved in the legitimacy of decision-making procedures:

> In all Assemblies and Societies, which proceed by the way of suffrage, the major part concludes and determines for the whole, to avoid confusion and dissention, and to preserve unity and order. Yet so that the major part may err; because they are not infallible: and one good reason being evident should prevail against ten millions of vote; We find that most men in their suffrages, follow the example of some eminent person or persons, or their own affection; few are determined by reason. And in doubtful matters, men should first debate and thoroughly examine the thing debated, before they proceed are to give their voices; and this is most properly and conveniently done, when after a diligent search, no preponderant reason can be found for either part of the proposition: Men's votes are inferiour to reason and superiour Laws, and are not good because votes, but because agreeable reason. (Lawson, 1657, in Rogers, 1995, 33)

Indeed Michael Walzer (1983, 285) argues that "all arguments for exclusive rule, all antidemocratic arguments (...) are arguments for special knowledge".[9]

The tension between the political and the epistemic interpretations of decision-making was still clearly visible in the writings in the influential seventeenth century Natural Law theorist Samuel Pufendorf. Pufendorf (1688/1934) differentiated between two types of decision-making situations. First, there were decisions based on the weight of the argument. Second, there were decisions made in councils where the members had equal rights. Even if the weighing of arguments were the ideal method of making decisions (a concession to the medieval *sanioritas* principle), it was not applicable in political matters, because "they cannot conveniently be referred to arbitrators outside a society". Unlike his predecessors, Pufendorf had read Hobbes—the most important modern critic of the epistemic interpretation— and recognized the relevance of the Hobbesian central question: "Who shall be the judge?" When there is a disagreement over substantive issues, there is also likely to be a disagreement on who are the wise or best-informed. The most important decision to be made actually concerns the identification of the *sanior pars*. According to the epistemic conception, this decision should therefore also be made by those who are the wisest. But this would beg the question. Somebody has to have the power to arbitrate between the competing claims of epistemic authority. One of the central lessons of Hobbes's political theory was that the practical meaning of all the noble-sounding words such as 'right', 'justice', 'Natural Law', 'equity' or 'wisdom' was dependent on authoritative interpretation. Hobbesian logic, confirmed by the actual history of the Church, demonstrated that the conception of the *sanior pars* simply transferred the power of decision to the ultimate interpreter. Hence, although a decision based on wisdom and on arguments

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[9] See also Dahl (1989, 63–64).

was still the ideal, Pufendorf recognized that if decision-making were to be conceived as a collective task, at *some* level of hierarchy an equality of wisdom had to be presumed. As he says,

> neither would it be always expedient to give any one man in the council (...) the power of controlling the whole matter by his vote, and declaring which of the opinions is the better. For if the prerogative should be granted to him, he might prefer the judgment of the smaller party to that of the greater; nay he might reject both Proposals on pretence that neither was good; and thus he would, to all intents and purposes, be the sole arbitrary governor of the state. (VII, ii, 15)

In politics, unanimity was, for Pufendorf, the ideal rule, because all political decision-making presupposed the general and voluntary consent of all the members of the political bodies. However, it could not be used as a method in everyday decision-making, for

> in such councils, especially when they are composed of many men, business is carried on with the utmost difficulty, and often they cannot have any outcome at all, because of the differences in opinions arising from the invincible obstinacy of some members. (*idem*)

Thus, majority rule was used, "not because there is any necessity by nature for it to be so, but because there is scarcely any other way for them to carry on their business" (*idem*, p. 988). The majority voting is "a method which admits no difficulty or obscure judgement". The use of the majority rule was justified in pragmatic terms, not, as in Grotius, Locke or Jefferson, by the Law of Nature. For the contractarian theorists the problem was not only the potential incompatibility between "wisdom" and majority rule, but, more importantly, between the natural rights of an individual and the binding power of majorities. Pufendorf, like Hobbes before him and Rousseau after him, thought that majority-decisions were ultimately validated by the original unanimity of the contract; but the particular way of making decisions was accepted in the original contract for practical reasons.

2.1.4 Majority Rule and the Rise of Modern Parliamentarism

The role of the medieval and early modern assemblies was more or less defensive. The requirement of unanimity or of a large consensus provided an effective protection for traditional privileges against the princes, but at the same time it ensured that the assemblies did not become active centres of power. In most cases, the estates met separately and communicated with each other through letters and envoys. The imperative mandate was generally applied: the members of the Polish *Sejm*, the Imperial *Reichstag* and the Pyrenean Estates were all bound by their constituents and had to follow their will more or less rigorously. This made the deputies less susceptible to the royal influence and to corruption; yet, at the same time, it made it more difficult for the assemblies to adopt any common policy (Holden, 1930). The seventeenth century absolutist kings deprived once powerful assemblies of most of their power. This was at least partly due to the ineffective

methods of decision-making. It is hardly an accident that the two most powerful and active representative bodies of the eighteenth century Europe, the Parliament of England and the Estates of Sweden, abandoned the idea of an imperative mandate, and developed well-established majoritarian institutions. They were followed in this by the United States and the revolutionary France.

In seventeenth century Sweden, unanimity between the four Estates was needed for a decision; if there were several proposals, the King was free to choose from among them. In their internal decision-making, the Estates adopted group representation. For example, the Estate of Nobles was divided into three classes and every class had one vote. Only in 1719 did majority rule become the standard practice. After that, unanimity of the Estates was required only in constitutional matters, and within each estate every member had one vote. The committee system developed, and when the Estates were unable to agree, issues could be delegated to an extended committee which was allowed to make simple majority decisions (Brotherus, 1948, 25, 33–34, 69; Renvall, 1962, 141–143, 220–221). The members of the Estates themselves were to be elected by majority rule. During the Age of Freedom (1721–1772) the Estates became the centre of political power in Sweden (including the provinces which nowadays constitute Finland).

From the Swedish Estates, the use of the majority principle spread to the Swedish civil society. For example, the parishes of the Swedish Lutheran Church had traditionally the right to choose their own ministers. However, the choice had to be a unanimous one; if it were not, the local bishop could intervene and nominate his favourite. In 1731, the Estates accepted a law that established the majority (or plurality) rule in the elections of the ministers. Before the early eighteenth century, mayors and aldermen were either elected unanimously or nominated from above; now majorities became decisive even there, although both in parish elections and in mayoral elections the King still had the final power of nomination. Empirical studies show that when majority elections were allowed in Sweden, the number of unanimous elections decreased rapidly. In the two eastern (Finnish) bishoprics, the total number of unanimous elections of priests was still 32.2 % in 1730–1765. Between 1766 and 1808, their number declined to 12 % (counted from Matinolli, 1955 and Matinolli, 1957). Similarly, townships and boroughs adopted the new practice quickly: the last examples of unanimous elections of mayors in the Finnish part of the Swedish empire took place in the 1760s (Mäntylä, 1977, 1981). Interestingly, the unanimity requirement survived in parish meetings in the countryside and in the general meetings of burghers in the cities. Although the royal letter of 1755 allowed the parishes to make their decisions "unanimously or with most votes", unanimous decisions were usually required in most issues even in the mid-nineteenth century. Contrary to many historians, the unwillingness to accept the authority of majorities in decision-making cannot be explained in terms of old traditions; after all, the same burghers and peasants were quite willing to use majority rule in elections. A more plausible explanation is related to the nature of decisions. In candidate elections, the unanimity requirement meant that when unanimity could not be reached the decision was transferred to elsewhere, while in practical decision-making it simply meant a return to the *status quo ante*. The

lesson is that the actual effects of the unanimity rule (or of any rule requiring more than a simple majority) are largely determined by the attached default rule, in other words, the rule which determines what is going to happen if the required unanimity is *not* reached.

Writing about early England, Baty (1912, 2) states that "there existed no notion that a mere majority could control a considerable minority. The equation of the will of the majority to the will of the whole was simply unknown". Although there were individual instances of majority decisions in British parliamentary history, the first clear cases are from the fifteenth century. The majority principle did not become decisive in elections to the English House of Commons until 1430. However, even three centuries later, in many constituencies the elections remained uncontested, that is, unanimous. According to Kishlansky (1986), election contests were still anathema to local communities in the early seventeenth century. In the House itself the rule became firmly established only during the same century.

The ideals of unanimity and hierarchy were still predominant; as late as 1604, the losing candidate in the constituency of Worcestershire argued that he was actually entitled to the seat, for his voters were "*of better sorte and qualytie*" (Hirst, 1975, 13–14). In elections, candidates were chosen by local elites in closed negotiations: the choices were based on rank and status, rotation and compromises. Sometimes they cast lots. Contests did appear, but usually they were not "political"; they were caused by personal animosities and sometimes by sheer misunderstandings and failures of communication. The local magistrates did their best to prevent contested elections. It was not until the 1640s that political divisions became accepted and institutionalized in England. According to Hirst, there were 14 contested elections in 1604, 28 in 1625, but as many as 86 in the second elections held in 1640. After the Civil War, electoral contests became the norm rather than an exception. This measures the growing legitimacy of majority decisions and the decline of the ideals of unanimity and of qualitative criteria.

In America, the first plan for a constitution—the Albany Plan for Union (1754)—was based on unanimity. However, the highest legislative body of the American Confederation, the Continental Congress, began its work by using unlimited and unstructured majority decision-making. The drafted Constitution of the Confederation remained un-ratified until 1781. Its ratification suddenly transformed the decision-making process in Congress. Articles of the Constitution required a qualified majority of 9 states out of 13 for important decisions, and all changes to the Articles had to be approved unanimously. Moreover, each state was accorded a single vote which depended on the simple majority in the state's delegation. Thus, coalition-building in the Continental Congress was very difficult: in order to get a decision through, one has to persuade the majorities of the delegates of at least nine states. Because of the low attendance, most decisions required a virtual unanimity of those present. Before 1781, about 60 % of all the motions put forward in Congress were approved. After the ratification of the Articles, the proportion fell to 30 %. For example, the Continental Congress was unable to make a decision on the location of the capital of the Confederation. The issue was discussed on numerous occasions—in March 1783 alone, there were

33 roll-calls on the issue—but nothing was decided. These rules triggered the constitutional crises which led to the creation of the United States (Wilson, 2002). Thus, the ratification of the Federal Constitution was an important victory won by majority-rule—a fact well understood by the Founding Fathers themselves (see *The Federalist* # 22). Both in the United States and later in Switzerland (1848) the new, federal institutions could be created only by disregarding the strict supermajority requirements of the old confederative constitutions.

On the Continent, representative institutions were resurrected in the nineteenth century, now in the name of democracy and of popular sovereignty. All the major upheavals in the Western states—the English, American and French revolutions as well as the creation of the Italian, German and Swiss states—effected replacements of the old, quasi-consensual institutions by new, majoritarian ones. The traditional link between democracy and majority rule was re-established. Thus, Lord Bryce could define democracy as "government in which the will of the majority of qualified citizens rules", while according to de Tocqueville, "the very essence of democratic government consists in the absolute sovereignty of the majority". However, although the majority principle prevailed in the nineteenth century in general elections and in parliamentary decision-making, its range of application was still constrained in many ways. The conservatives criticized the "purely numerical" majority principle and contrasted it with "qualitative" considerations. It was a "fundamental right of the Germans" declared the Prussian ultra-conservative Ludwig von Gerlach, "not to be counted piece by piece like herrings" (Anderson & Anderson, 1967, 316). The Swedish politician Louis De Geer wrote in the 1860s how

> the duty of a minority to obey the arbitrary will of a majority is actually an evil which cannot have a theoretical defence. In contrary, there exists for every man a duty to obey a law which is higher than the human law, namely that of truth and justice, and only such a basis of voting is defensible which gives the decision to those who are most able to understand and apply this higher law. (Quoted from Mellquist, 1974, 106–107; my translation)

In England, Walter Bagehot warned about the increasing power of the lower classes: "their supremacy, in the state they now are, means the supremacy of ignorance over instruction and of numbers over knowledge" (Bagehot, 1867/2003, 278; cf. also Calhoun, 1853/1953, 22–23). The conservatives of the next century still continued the tradition: in his *Verfassungslehre* (1928) the German conservative lawyer Carl Schmitt speaks with the same tone about "the mathematical orientation toward the mere tabulation of voting results, which is a purely quantitative, arithmetic idea" and praises Rousseau, who knew that "it is in no way democratic, if ninety corrupt persons rule over ten honourable persons" (Schmitt, 1928/2008, 280). Here we can hear an echo of the medieval *sanioritas* requirement.

In practice, however, the "qualitative" requirements were invariably used to justify purely formal and mechanical restrictions and qualifications of individual voting rights. The most important restriction was the suffrage limit: majorities were disenfranchised because of income, class, and gender requirements. Moreover, in many systems there were two chambers and although these bodies themselves used

majority rule in their decision making, the concurrence of both chambers was often required for collectively binding decisions. The members of the upper estates or chambers were elected by privileged groups, nominated by the King, or given their seats *ex officio*. Even when there was a single chamber, the privileged groups often elected their own representatives; the votes were unequal. In Prussia, for example, voters were divided into three classes on the basis of the taxes paid. Each class elected a third of the electors, who in turn elected the deputies to the *Landtag*. The two classes of the high income taxpayers—13–20 % of the adult male population—could therefore dominate the Prussian politics. This system did not establish a uniform pattern, for the class distinctions were based on *relative* contributions. A *Junker* in a poor Eastern precinct might belong to the highest class (perhaps alone) while someone paying the same absolute amount of taxes in a wealthy town might belong to the lowest class (Anderson & Anderson, 1967, 316–317). Similar class-based systems were in use in Oldenburg (two classes), Hamburg (the class of property owners and that of *Notablen*), Lippe, Bremen, and the Saxonian states (Urwin, 1974, 117). In Austria, there were four *curiae*: the great landowners elected 85 deputies, the members of commercial chambers 21, the male inhabitants of cities 116 and of rural communes 131. In the Danish local elections, the high income taxpayers—one fifth of all—elected a half plus one of the members of the communal councils (*sogneraadet*). Similarly in France after 1831, three fourths of the members of the communal councils were elected by those with high incomes.

Multiple-vote systems were used, especially in local elections. In Belgium, the owners of real estate had one additional vote and citizens with higher education two additional votes; in Saxony, voters had 1–4 votes; and in the Swedish and Finnish local elections voting rights were gradated: voters had 1–100 votes, depending on the amount of taxes they paid. After the Sturges-Bourne Act in 1819, English local government votes were also gradated, the maximum of votes being 6 [10] (Mellquist, 1974, 30–33). In assemblies with a single chamber, those representing the privileged groups sometimes had more votes than others (in Hanover, the knights had two votes while the other representatives had only one). Finally, parliamentary elections were often indirect (for example in France up to 1816, in Germany up to 1848, in Norway, Prussia, and Hesse as late as the early twentieth century). After 1907, Imperial Russia established an extremely complex and capricious indirect system for electing the members of the *Duma*. The largest landowners participated in the election directly, while the smaller landowners had to choose electors, and peasants' votes had to go through a third screening.[11] The conservatives clearly perceived these alternative restrictions of majority rule as complementary.

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[10] Thus, J. S. Mill's famous plural-vote scheme (Mill, 1861/1972, 283–290) can be seen as an attempt to balance his radical proposal of general suffrage with a relatively familiar and widely accepted conservative element. After a consideration, Mill rejects another common device, the use of indirect elections (pp. 293–298).

[11] One of the institutions that the Bolsheviks adopted from the Czarist government was the totally arbitrary division of electoral constituencies and the attached system of indirect elections; both were in use in the first elections of the national Soviets.

For example, the theorist of the slave-owning South, John C. Calhoun argued that "universal" (male, white) suffrage was acceptable on the condition that the "numerical" majority would be replaced by the "concurrent" majority—that is, unanimity of all important social groups—as the central criterion in decision-making (Calhoun, 1853/1953).

The conservative "anti-numerical" arguments were brilliantly discussed (and ridiculed) by Max Weber in his important text 'Suffrage and Democracy in Germany':

> There is no getting away from the fact that the real and approximate *counting* of votes is an integral and essential element both of modern electoral contest and the conduct of business in parliament. Our romantics, for all their horror of 'numbers', will not change this fact. Let them stay away from politics if 'counting' seems to them too prosaic a device. (Weber, 1917/1994, 102)

Weber remarked that all proposed 'organic' alternatives to majority rule and equal suffrage—including the Prussian three-class-system—were based "purely and simply on electoral arithmetic".

2.1.5   Conclusion: The Problem of Collective Reason

As we have seen, over 1000 years simple (absolute) majority rule competed with other methods such as the unanimity-rule and the qualitative principle. To quote Heinberg (1926, 61), the several components of the majority principle "are found to be working smoothly in the Athenian ecclesia, and not again until we reach the sixteenth century English House of Commons". And only in the twentieth century did majority rule become predominant in its "normal" sense: representatives, elected by a majority of the adult population by a universal and equal suffrage, make the most important political decisions by using simple (absolute) majority rule, without a need to receive binding instructions from their constituents. *Even if democracy is not equated with majority rule, the triumph of democracy is essentially a triumph of majority rule*. But, *contra* Grotius, Jefferson, and Arendt, there is nothing self-evident or inevitable in this development. To say that majority rule is a "natural" principle is to beg the question. *Why* does it appear to be natural? But to say with critics such as Edmund Burke that it is just one contingent convention among many is also begging the question. Why have so many groups and organisations ended up accepting *this* particular convention? The emphasis common for many historians of majority rule is that the practice has been developed quite independently of any theoretical justifications. Baty (1912, 26) once speculated how

> mental indolence was responsible for the acceptance of majority rule; that people who were accustomed to accept majority decisions in indifferent matters came to believe that they were obliged to accept them in all matters. (...) Never deliberately or of set purpose adopted as a principle, it [majority rule] has drifted into a casual acceptance through indolence.

However, it is hard to believe that the triumph of majority rule had *nothing* to do with its inherent properties. The history of the practice, reviewed above, shows that the principle is not "natural" in the sense of being universally accepted or self-evidently valid; nevertheless, it had become the common practice of most political (and many non-political) institutions and associations. Without supposing any transcendent reason revealing itself in history, we may still think that the triumph of majority rule is somehow related to its background justifications. The development of decision rules is closely connected with the development of the modern state and civil society. The modern state is characterized by the need of an effective decision-making procedure, the need for authoritative decisions, formal equality, heterogeneity of the members, and by their relative autonomy. All these factors are conductive to the use of the majority principle.

The last two factors require some elaboration. In a homogeneous group, there is less need for an authoritative method to solve disagreements, while in a heterogeneous society where all the differences are stable and predictable the problem of permanent minorities (see Sect. 2.2.4 is inevitable. For example, in the medieval and early modern *Ständestaat*, a heterogeneous society consisting of permanent and homogeneous groups, representation was typically based on the imperative mandate. Proportional power-sharing, rotation of offices, and corporative veto-rights were seen as more natural than the majority rule. In contrast, under conditions of relative individual autonomy there are likely to be different interests and opinions, but no *permanent* minorities and majorities.

In this work, several "impossibility results" will be introduced. The first and perhaps the most important of the impossibility results related to collective choice appears in the narrative told above. From the early days of the Church to the seventeenth century Estates unanimity or consensus was the prevailing ideal. Because it was not always attainable, an additional principle was needed—a principle that would simulate individual human reasoning by being regular and ordered while still allowing a role for qualitative considerations. But no such principle was found. Unanimity had a tendency to lead to deadlocks, to chaos and sometimes to outside interventions, while all attempts to build the requirement of greater wisdom into the decision principles led to endless disputes of interpretation. As Sir Robert Filmer commented: "If the 'sounder, the better, and the uprighter' part have the power of the people, how shall we know, or who shall judge, who they are?" (cf. Pufendorf, 1688/1934, VII.vii.18) In practice, all attempts to apply the qualitative principle only enforced the existing inequalities and created new ones. In the Church, it ultimately enforced the supremacy of one single man.

In a sense, the principle formulated by Pope Gregory X—"only numbers with numbers are to be compared"—reflects one of the most important revolutions in Western political thought. People had to admit that collective rationality did not work like individual rationality. *In order to be regular, collective choices had to be based on mechanically applicable procedures.* In this sense they had to be "arbitrary"; they had to be based on the respective support of alternatives or candidates, not on any substantive considerations. The majority principle, once accepted as a default rule for exceptional situations, has provided a lasting solution. So, the rest of

this book is mainly about the consequences of a decree issued by a Pope over 700 years ago.

2.2 Choices with Two Alternatives

The first systematic studies in the social choice theory, those written by Condorcet, Borda, Dodgson, Nanson, and Heckscher, were motivated by the search of the optimal or fairest voting rule. Thus, the early history of the discipline is closely tied to the actual development of decision-making rules, described in Sects. 2.1.1–2.1.4. After the seminal contributions of two economists, Duncan Black and Kenneth Arrow, the theory became an established academic discipline, with close connections to economics and to applied mathematics, and with numerous potentially interesting applications. In this work, however, I am mainly interested in its implications for democratic theory. Hence, the traditional interpretation of the theory of social choice as study of voting occupies a central place in this work. The purpose of this work is first, to provide an informal introduction to some basic concept of the theories of social choice and second, to discuss their interpretation and on their relevance to the normative philosophy of democracy. The criteria used in the theory of social choice are here interpreted as criteria for *good, fair or reasonable decision-rules*. As we shall see, this interpretation is not without its problems.

2.2.1 The Uniqueness of the Majority Principle: May's Theorem

I shall start with the simplest case: choice between two alternatives. A simple but important result, proved by Kenneth May in 1952, shows why, in such a case, the majority principle is unique.

The first set of criteria needed in May's classical proof is those related to the *equality* or *fairness* of our decision-making methods. This does not mean that these criteria are universal; in many contexts of decision-making equality does not seem to be ethically necessary or even desirable. In democratic contexts, however, they seem to capture at least a part of the notion of political equality.

The *anonymity* condition requires that the outcomes of a decision-making process are not affected by who votes on which side; they depend only on the number of votes. Thus, if equal numbers of voters switch their preferences to opposite directions—for example, if one voter decides to vote for alternative *a* instead of alternative *b*, while another voter decides to vote for *b* instead of *a*— the outcome does not change. The matter becomes clearer if we consider decision making rules which do not obey this condition. For example, voting power in

stockholders' meetings is allocated not on the basis of "one person, one vote" but in a proportional relation to the respective shares. Similarly, in the Council of Ministers in the European Union, voting power is roughly dependent on the population of the Member States which the ministers represent. In the UN Security Council, the five permanent members have the power of veto over decisions. The voting privileges and the class representation characteristic of the pre-democratic representative bodies also violated the anonymity condition.

If the anonymity condition requires that *decision-makers* should be treated equally, the *neutrality* condition requires that *decision alternatives*—the alternatives which are voted on—should be treated equally, so that every alternative has the same *prima facie* possibility of winning. Suppose that some members of a committee prefer *a* to *b*, while the other members prefer *b* to *a*. The decision rule chooses *a*. Suppose that every member who originally preferred *a* to *b* starts to prefer *b* to *a*, and *vice versa*. If the decision-rule is *weakly* neutral (or *symmetrical*), it now selects *b*. *Strong* neutrality requires that neutrality requirement can be applied to all pairs of alternatives. If all voters order the alternatives *c* and *d* in the same way as they order the alternatives *a* and *b*, then the choice between *c* and *d* should be the same as between *a* and *b*. (This additional requirement implies the property called *binary independence*. It will be discussed in Sect. 4.3.1.) In the case of two alternatives, however, strong and weak forms of neutrality are indistinguishable. Again, it is easy to see the intuitive meaning of the weak neutrality requirement by considering decision-making rules that violate it. Qualified majority rules—say, a two-third or three-fourth requirement, and, of course, a unanimity or general veto rule—are typically non-neutral. Normally, the privileged alternative is the *status quo*. If the required special majority is not reached, the *status quo* will remain in force.

Political equality clearly requires something like anonymity. But does it require neutrality? The fundamental idea of political equality is equal treatment of voters, not of decision-alternatives. But political equality also requires an equal treatment of voters as *initiators* of decisions. A non-neutral procedure is biased against some alternatives; hence, it is biased against the voters who initiated those alternatives (Christiano, 1990, 156–157; Nelson, 1980, 19–20). It is revealing that non-neutral rules are almost never used in electing officials. A rule prescribing, for example, that a candidate should become the President unless at least two-thirds of the electorate supports another candidate would certainly violate political equality.

A qualified majority rule can also be neutral. In that case, there is no "default rule" favouring the *status quo*. Any decision requires the support of a specified majority. Such a rule does not satisfy a third condition, namely *decisiveness*. A non-decisive rule is a rule which, under some circumstances, fails to produce *any* outcome. To take an example, the rule used in presidential candidate nominations in the party conventions of the US Democratic Party required that the elected candidate should have two-thirds of the votes. This rule made the election of a candidate extremely difficult; in 1924, 103 ballots were needed until a decision could be

made.[12] To take a more recent example, the Slovakian Parliament had to elect the President by using a five-seventh-majority rule. By the end of 1999, their Parliament had made 11 unsuccessful attempts to come up with the required majority. Decisiveness is required by rationality rather than by fairness; it prevents deadlocks. As Nurmi (1988, 143) says, "It seems that the basic virtue of choice-making institutions is decisiveness, i.e. their ability to produce choices for the collectivity". So, it is not surprising that both the US Democratic Party and the Republic of Slovakia have changed their constitutions. There is, however, a complication related to the notion of decisiveness. When should the inability of a decision-process to deliver an unambiguous verdict be interpreted as non-decisiveness rather than as a *tied result* or a collective indifference? Quite often (for example, by Goodin & List, 2006) decisiveness is defined so that it is compatible with ties. As a consequence, even a rule which invariably produces tied results is classified as "decisive". In contrast, Brams and Fishburn (2002, 181, 183) call a voting function "decisive" only if it does not produce ties. This stronger property is sometimes called *resoluteness* or *strong* decisiveness.

What happens if a rule is *not* decisive, that is, "no choice" is made? In real life, when a rule fails to produce any outcome, *something* does happen nevertheless; some states of affairs do prevail or emerge. For example, when the Cardinals' Collegium of the Church failed to choose a new Pope, the cardinals had to negotiate, and the process could take several months, even years (see Sect. 2.1.1). In the meantime, the Church was without a spiritual leader. To take another example, before the adoption of the Seventeenth Amendment, the US senators were elected by the legislatures of the States. The absolute majority rule was used. Between 1871 and 1913 there were 13 deadlocked cases in which the State legislators were unable to choose anyone. Schiller and Stewart (2004, 11) tell how the 1896 Kentucky legislature balloted 51 times for nearly 2 full months and then adjourned *sine die* without choosing a senator. The governor then called the legislature into special session the next year, which produced a 2-month long session that took 60 ballots to finally elect W. J. Deboe (Rep.) to the Senate. The authors remark that such cases are the most extreme indicators of electoral conflicts, since they indicate that "a majority of the state legislature regarded *the election of no senator* to be preferable to electing a compromise candidate" (*ibid*., p. 3; my emphasis). The implication is that "no senator" was considered as an alternative and preferred to some other alternatives.

Cases of "not choosing" often have dramatic political consequences. They may create new possibilities for horse-trading and for outside interventions; they may allow the powers-that-be to continue as caretakers and state-holders; they may create legitimacy crises and force to new elections, *etc*. For these and other reasons, some voters may actually prefer the possibility of a deadlock over the election of

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[12] The two-thirds—rule was introduced by the Southern Democrats in 1844. At the 1860 convention, it caused a split in the party. No candidate could win the required super-majority, so the northerners nominated Douglas and the southerners nominated Breckinridge.

some candidate. Consider the alleged tactics of Prime Minister Vladimír Mečiar in the Slovakian case. According to some speculations, Mečiar wanted to prolong the election process in order to stay in power and to improve his own future chances of becoming President.[13] If a voting rule is not decisive, some voters may try to produce a deadlock; but the possibility of a deadlock does not appear on the agenda as one option among others. It seems that, at least in some cases, the analysis should treat a deadlock as a decision-alternative among the other alternatives. This would change the interpretation considerably.[14] Most notably, while symmetrical supermajority-rules are, in the formal sense, "strategy-free" (in effect, they satisfy the strong neutrality and weak monotonicity conditions; see below), our examples show that they actually do allow certain forms of strategic behaviour.

Because the simple one-stage majority rule is neutral and anonymous, it ensures equality, one aspect of procedural fairness. This does not yet make it unique, for weak neutrality and anonymity do not exclude *fair-chance mechanisms* (Ackerman, 1980, 285–289; Estlund, 2008, 78–82; Nelson, 1980, 18–20; Saunders, 2010). Anonymity and neutrality guarantee an equal distribution of power, but the distribution of power is also equal when *no* citizen has any power over the outcomes— for example, when the outcome is selected by tossing a coin. If, however, we add the democratic premise that voters ought to have some effective power over outcomes, we need some kind of *monotonicity* (or *responsiveness*) postulate, and this rules out the use of random mechanisms. Monotonicity (or responsiveness) requirements ensure that there is a regular and reasonable relationship between the popularity of various alternatives and the content of decisions. *Strong* monotonicity or *positive responsiveness* requires that if there is a tie between two alternatives (*a* and *b*) and at least one voter changes his/her preferences in favour of one alternative, that alternative is selected. Hence, it maximizes the power of an individual voter within the constraint of voter equality (Sadurski, 2008, 73). Strong monotonicity implies *weak* monotonicity or *non-negative responsiveness*: if there is change in the decision-makers' preferences in favour of a candidate—say, *a*—while all other preferences remain the same, then *a*'s chances have not been weakened. Additional support cannot harm a candidate. If this requirement is not satisfied, it is sometimes advantageous to vote against one's preferred candidate. Trivially, the weak monotonicity requirement excludes minority rules—for example, rules which would require that a candidate should have *less* than half of the votes in order to win. It seems to be clear that our conception of democracy requires *something* like

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[13] A similar deadlock appeared in the Moldovan presidential elections 2009–2010. The Moldovan parliament chose the President with a 3/5-majority. After two subsequent failed elections, the parliament had to be dissolved. Neither the Communists (the largest party) nor their opponents were able to find the required supermajority. First the opposition forced new parliamentary elections by deadlocking the presidential elections; after losing their parliamentary majority, the Communists adopted a similar strategy.

[14] The problems related to "the act of not choosing" have been neglected in the formal theories of choice. There is a brief comment on the issue in Frohlich and Oppenheimer (1978), pp. 9–10. On "non-decisions" in political theory, see the classical article of Bachrach and Baratz (1963).

monotonicity. To quote Nurmi (1987, 78), "the [weak] monotonicity criterion is undoubtedly one of the basic criteria of democratic group decision making". William H. Riker (1984, 106) puts it even more forcefully: "the failure to ensure monotonicity (. . .) is the worst possible sin an electoral system can commit". As we shall see, this view is not universally shared; but certainly all democrats agree that a positive connection between the relative popularity of an alternative and its probability of becoming the final outcome of the decision-making process is one of the defining properties of democracy.

2.2.2   May's Theorem and Procedural Fairness

Interestingly, if all the properties discussed above are accepted, we have a strong argument for majority rule in the case of two decision alternatives.

May's Theorem Majority rule is the *only* rule which satisfies the following requirements:

 (i) Anonymity
 (ii) Strong neutrality
(iii) Strong monotonicity, and
(iv) Decisiveness.

Many theorists of democracy have been impressed by this theorem (Ackerman, 1980, 277–285; Christiano, 1990, 154–157; Dahl, 1989, 139–141; Gaus, 1991; Nelson, 1980, 18–20; Saward, 1998, 70–72; Waldron, 1999a, 189; Weale, 1999, 129–130). The theorem shows that when we have to choose between two alternatives, majority rule is the only rule which respects the equality of voters, is not biased towards any of the alternatives, is sensitive to the changes in voters' opinions, and always gives an unambiguous result.[15]

Some theorists, such as Charles Beitz (1989, 58–67), Jules Coleman and John Ferejohn (1986; also Coleman, 1989), Mathias Risse (2004), David Estlund (2008) and Ben Saunders (2010, 167–168) have not been equally convinced by the relevance of May's Theorem. They have challenged the view that our intuitions

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[15] Here the problem of tied results is abstracted away. When the number of voters is even, the absolute-majority rule may produce ties. If there is no tie-breaking rule, and both candidates cannot be elected simultaneously, the rule is not decisive. For this reason, most committees use some tie-breaking rule. If the chair has the power to break ties, anonymity is violated. If ties are broken by drawing lots, strong neutrality is violated. If the *status quo* wins in tied cases, weak neutrality is violated. All tie-breaking rules violate some of May's conditions. So, some condition has to be sacrificed for decisiveness. This, I think, shows that a violation of a condition may sometimes be quite harmless. Still, people are not indifferent with respect to the alternative tie-breaking rules. For example, in European parliaments, ties on ordinary motions are usually solved by the *status quo* rule, while in electing the presiding officer ties are most often solved by drawing lots (Rasch, 1995, 500).

of political equality could really be interpreted in terms of May's formal conditions. Beitz, for example, complains that the theorem is too abstract. According to him, it does not reproduce any problem that arises in "commonsense reflection about political morality"; the reason for this is that it abstracts away all contextual considerations (Beitz, 1989, 60). Procedural equality of voting rules embodied in May's conditions is only a part of the more general requirement of political equality, and cannot be treated in isolation. Both Beitz (pp. 63–64) and Coleman and Ferejohn (p. 18) use qualified-majority rules as an example. They claim that although qualified-majority rules are weakly monotonic, they violate May's strong monotonicity condition but satisfy the rest of the conditions:

> If we drop the strong monotonicity condition in favour of weak monotonicity, [May's] uniqueness result evaporates. (. . .) Special majorities are weakly monotonic, and moreover, they are more likely than simple majorities to constitute what we would normally think of as expressions of popular or general sentiment. The strong monotonicity requirement is inadequately motivated; weakening it, however, precludes uniqueness. (Coleman & Ferejohn, 1986, 18)

Actually, qualified-majority rules with a default rule do satisfy the strong monotonicity requirement, but violate weak neutrality, while qualified-majority rules without a default rule do satisfy neutrality but violate strong monotonicity *and* strong decisiveness. The latter may be made decisive by adding some other default rule (e.g. tossing a coin) but that would violate strong neutrality. Moreover, if ties are very common, the tie-breaking rule becomes all-important. If all undecided cases are interpreted as ties, even a rule which *invariably* produces a "tied result" satisfies all May's conditions except the strong monotonicity condition. Obviously, Coleman and Ferejohn do not want to argue that such a rule would be "democratic". Suppose that we strengthen the decisiveness condition slightly by requiring that it would sufficient to break a tie for some voter who has abstained to cast a vote (It is a stronger requirement than decisiveness but weaker than resoluteness.) This requirement is termed *resolvability* by Tideman (2006, 87). Then, the uniqueness result returns even when the monotonicity requirement is weakened:

Modified May's Theorem Majority rule is the *only* rule which satisfies the following requirements:

 (i) Anonymity
 (ii) Strong neutrality
(iii) Weak monotonicity
(iv) Decisiveness, and
 (v) Resolvability

Coleman has further argued that "satisfying both anonymity and neutrality should count decisively in favour of a voting procedure only if one can *never* imagine circumstances in which influence should be different among voters or in which alternatives should have an advantage" (Coleman, 1989, 206; emphasis mine). Of course, we can easily imagine circumstances in which such rules are, nevertheless, justified. Private corporations, international organizations and juries still use decision-making rules which may violate neutrality, anonymity, or strong

monotonicity conditions. However, these organizations do not purport to be democratic. Their decision-making rules can be fair or unfair, but in these contexts democratic equality is not a part of the relevant notion of fairness. This can, of course, be challenged. For some people, the decision-making rules used in stockholders' meetings, or in the UN Security Council, or in the European Union, *are* unfair because they are not "democratic". But most people are likely to admit that in *some* contexts fairness requires or at least allows the use of some procedures other than the simple majority rule. The point is not that majority rule is justified in all contexts, but that, given the unique status of majority rule as shown by May's theorem, there is a *presumption* for it, and therefore the use of other rules needs specific contextual justifications. It may well be true that people in general do not have intuitions about the acceptability of May's conditions (Saunders, 2010, 167). I do think, however, that something like May's theorem *is* behind many defences—commonsensical or not—of majority rule. The classical defences of majority rule are formulated in the context of a binary choice. In those contexts any rule other than one based on an absolute majority violates equality either directly, by favouring some specified group (voting privileges), or indirectly, because it is biased for an alternative (qualified majorities). Generally, the movement towards democracy in the nineteenth and twentieth centuries, shortly described in Sects. 2.1.1–2.1.4, has meant the rejection of non-decisive, non-anonymous and/or non-neutral decision mechanisms.

However, it is true that even democratic states often apply decision-making rules which violate May's conditions. These violations are justified by appeals to context-specific properties. Consider the "consociational" devices discussed by Arend Lijphart (1984, Chapter 2; in the social choice context, see Pildes & Anderson, 1990, 2182–2183). Such devices are, for example, qualified majorities required for constitutional amendments (a violation of weak neutrality), explicit power-sharing formulas and quotas protecting minorities such as the Maoris of New Zealand (a violation of anonymity), and veto rights for named groups like the two main linguistic groups in Belgium or confessional groups in Northern Ireland (a violation of both requirements). According to Lijphart, while such consociational devices are incompatible with pure majority rule, they are compatible with democracy. Their main functions are related to the two possible problems associated with the simple majority rule. First, majority rule may produce unfair outcomes if there are permanent majorities; second, majorities may violate the basic rights of minorities. As Ackerman (1980, 280) says, May's argument for majority rule is applicable only when restricted to "non-exploitative" contexts.

However, one should recognize *that non-majoritarian rules, including the unanimity rule, can also be used for "exploitative" purposes*. Even in democratic contexts, "exceptions" from the pure majority rule may well be contextually justified but if such justifications are too easily available, the exceptions and qualifications may undermine the principle of political equality. Then, following Brian Barry, we may question whether a system characterized by strong counter-majoritarian consociational devices is still a consociational *democracy*, whatever other positive properties it may have. Suppose that in a democratic system some groups have a right of veto over certain decisions. Then, extend this right over more

and more issues, so that it finally covers *every* important decision. Surely there is a point after which we would be hesitant to call the system a democracy. Consider the Colombian pact in 1958, which ended the destructive civil war between the *Blancos* and the *Colorados*. According to the pact, for the next 12 years the seats in both Houses of Congress, all cabinet offices, and seats in the Supreme Court as well as in departmental assemblies and municipal councils were two be divided equally between the two parties. In all elective bodies substantive measures required a two-third majority to be accepted. The pact might well have been necessary to end the civil war. It might even have been an essential step towards establishing a democracy, but was the resulting system of power-sharing itself a democracy?[16]

Charles Beitz is absolutely right in insisting that the fairness of democratic decision-making rules should be assessed in the context of the fairness of the overall political process. Nevertheless, formal criteria such as those used in May's Theorem may well be a part of this wider notion of fairness. Moreover, even non-neutral supermajority rules (including unanimity), may have unfair consequences. They tend to protect the *status quo*, whatever it is. If the protected *status quo* is exploitative, their consequences may be less fair than those of the simple majority principle. Non-neutral rules such as the supra-majoritarian rules characteristically required for constitutional amendments may be justified when *they protect the fairness of the democratic process*. If political equality—which can be partly formulated in terms of May's conditions—is essential, temporary majorities (or minorities, see below) should not be allowed to violate it. This may justify exceptions from the majority principle, for example, the minority veto accepted in the Good Friday Agreement in Northern Ireland. Indeed, it may be legitimate to protect political equality by rules that are totally unresponsive (or *imposed*). An example of this is the German constitution which makes it impossible to change "the republican form of government" by legal means.[17]

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[16] Switzerland is the crown jewel of the consociational theory of democracy. Since 1959, the posts in the federal government have been divided between the four main parties according to the "magic formula". The election results have no effect on the composition of the government. If this were the full truth about the Swiss political system, the country could hardly be called a democracy. However, this consociational arrangement is balanced by the extensive use of the purely majoritarian referendum device.

[17] Another context in which super-majority requirements are often applied is the regulation of relationships between separate democratically elected bodies. For example, overriding the veto of a second chamber or impeaching a democratically-elected President usually requires extraordinary majorities. In such situations, there is a majority-will operating against another majority-will, and it is a natural requirement to devise special qualifications in order to resolve the dispute. Schwartzberg (2014) argues that if it is necessary to violate neutrality in order to protect a minority, it is more advisable to violate anonymity too, by giving the protected minority an exclusive veto-right rather than establishing a general veto-right for all coalitions of a certain size.

2.2.3 Representation, Anonymity and Double-Counting: Mill's Problem

As Dummett (1997) remarks, elections in modern democracies have (at least) two different roles. They are used to choose individual representatives, and to determine the composition of representative assemblies. The normative aspects of voting and elections are not related only to the first aspect. All modern democracies are representative systems, and representation is almost always based on territorially divided constituencies. This means that there are at least two levels of choice: voters choose the representatives and the representatives choose policies (or governments which, in their turn, choose policies). Modern democracy is typically a *two-stage* process.

Representation is one source of political paradoxes. Consider the following example of the so-called "referendum paradox" (Nurmi, 1998). Suppose that there are only two parties in a parliament, **Y** and **N**. The party **N** has two-thirds of the seats in a parliament, party **Y** having the rest. The electoral system is proportional, so that 67 % of the voters support **N**-party. Suppose that an important proposal should either be accepted ("Yes") or rejected ("No") in the parliament. The parties in the parliament consult their supporters and decide to vote according to the will of the majority of the supporters *of their own party*. Suppose that the opinions of voters are distributed in the following way:

Example 2.1

		Party supporters	
		N	Y
Opinion	Yes	33	33
	No	34	0

All the numbers indicate the percents from the total electorate

The supporters of **N**-party are almost evenly divided between the two alternatives, while the supporters of **Y**-party are unanimously against the proposal. Now, if the representatives of **N**-party follow the opinion of the majority of their supporters, the proposal passes in the parliament with a two-thirds majority, while in a referendum it would be rejected with a 66 % majority. If there is a moral or legal practice which binds the representatives to follow their constituents' opinions (imperative mandate), situations like this are unavoidable. Interestingly, while the imperative mandate is intended to make the overall system more responsive to opinions of majorities, it may actually make it less responsive to the wishes of the *nationwide* majority by binding representatives to the opinions of *local* majorities. These paradoxes follow from the internal logic of the representative system. As Mill (1861/1972, 257–258) remarked, the problem of representative democracy is double-counting: a majority of a majority is often a minority in the entire society.

In the situation described in the example, the representative system can be conceptualized simply as a two-stage voting procedure used for making a single decision: first, decisions are made in subgroups (in this case, among the voters of

the two parties), then the final decision is based on the decisions made in the subgroups. May's Theorem implies that no two-stage voting procedure can simultaneously be anonymous, neutral, strongly monotonic, and decisive, for only the simple one-stage majority rule has all these properties. However, even when the strong monotonicity requirement is weakened, an impossibility result can be proved. An important result concerning all two-stage aggregation procedures is that if a two-stage aggregation procedure respects unanimity (that is, if, for example, all voter groups prefer x to not-x, x is chosen), and is weakly monotonic and *non-degenerate*, then it is not anonymous (Nermuth, 1992). In voting contexts, a "degenerate" procedure is a form of unanimity rule: an alternative is chosen if and only if all voters prefer it to the competing alternative. Because the two-stage majority procedure respects unanimity, is weakly monotonic and non-degenerate, it cannot be anonymous. Hence, when a two-stage majority process is used, it is possible to change the outcome by permuting individuals across the subgroups. Suppose that 2 % of the voter population belonging to the supporters of party **N** change their mind and switch from "No" to "Yes". Suppose also that (another) 2 % belonging to the supporters of party **Y** switch to the opposite direction. The total support of the competing alternatives remains unchanged, but (given that party **N** follows the opinion of a majority of its supporters) the outcome changes because voters belonging to the "right" subgroups change their mind. The working of the US presidential college provides a real-life example. In the elections in 2000, some 1000 additional votes for Al Gore would have made him the President of the USA, had they come from Florida. But an equal number of additional votes coming from a state already controlled by Democrats would have had no impact to the result. This shows that the vote-aggregation process violated the anonymity requirement. This property of two-stage majority elections has, of course, been known even before the times of John Stuart Mill, but the impossibility result above shows that it is a property of *every* reasonable two-stage procedure.

The source of the problem discussed above was the uneven distribution of Yes-voters and No-voters within the two parties. Majority rule produced diverging results when it was first applied within the two parties as separate units and then again to the whole population. It is easy to see that this problem is structurally similar to another traditional problem of representation. In majoritarian elections, majorities are counted from constituencies. In a two-party contest, a party may get a majority in the majority of constituencies without having a nationwide majority, even when all the constituencies are of equal size. In the following example, there are 15 voters voting either for party **N** or party **Y**. The voters are divided into five constituencies (A, B, C, D and E), so that every cell in the matrix below represents a voter. The **Y**-voters have a 3/5—majority in the electorate, but they are in minority of the majority of constituencies. Thus, the **N**-party has a 3/5 majority in the elected assembly.[18] This example may be used to illustrate gerrymandering, although such

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[18] On the "spurious" majorities in real-life elections, see Katz (2001) and Siaroff (2003).

a situation may, of course, emerge even when the constituency boundaries are not intentionally drawn in order to produce this kind of result.

Example 2.2

Constituencies				Candidate elected from the constituency
A	*N*	*N*	*Y*	**N**
B	*N*	*N*	*Y*	**N**
C	*N*	*N*	*Y*	**N**
D	*Y*	*Y*	*Y*	**Y**
E	*Y*	*Y*	*Y*	**Y**

As with the first problem, an impossibility result may be proven. Let us introduce the notion of *representative consistency*. A two-stage system is said to satisfy the requirement of representative consistency if the partitioning of the electorate into separate constituencies does not affect the outcome. In other words, it does not matter whether a decision is made directly by the whole electorate or whether it is first made in constituencies and then every constituency is dealt as a single voter having one vote in the final decision making, as in the early-modern Estates. It can be shown that no two-stage voting rule satisfies the conditions of unanimity, anonymity, neutrality, and representative consistency. This result has been proved by Christopher P. Chambers (2006). It is clearly a close relative of Nermuth's theorem presented above although the latter does not operate with the representative consistency condition. The immediate implication of these results is that all reasonably democratic two-stage procedures are vulnerable to gerrymandering, even when the constituencies are of equal size.

The double-counting problems may provide a *majoritarian* rationale for the use of non-neutral qualified-majority requirements in representative systems. Anckar (2004) has found that high supermajority-requirements—usually, three-fourths for a constitutional change—are typical for countries which (a) use a single-member district system, and (b) have only a small number of electoral districts.[19] Under such conditions, one party is likely to win a large majority in the Parliament even with less than 50 % of popular vote, as in Example 2.2. A low threshold—say, two-thirds or less—for constitutional changes in the Parliament may actually make an *electoral* minority group constitutionally omnipotent. However, with two competing parties and equal-sized constituencies, the maximal possible gain of a minority party is necessarily less than three-fourths of all elected representatives. Because a majority in a Parliament need not represent the majority of voters, non-neutral constitutional rules may actually *protect majorities against minorities*, not only minorities against majorities. It is symptomatic that qualified majorities are almost never required when a constitutional change is submitted to a direct referendum.

Technically, all the compound-majority problems can be avoided by using a 3/4 supermajority rule (Nurmi, 1998). However, outside the constitutional contexts, this solution is not plausible. The double-counting problems show that the two

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[19] Typically, these countries are (small) former British colonies.

components of the modern democracy, representation and majority rule, do not always work in a harmonious way. It is important to notice that these problems are *not* related to the standard "populist" critique of representation, the suspicion that representatives may "betray" the represented by imposing their own preferences. Imperative mandate, the old idea that representatives should be only delegates bound by the views of their constituents (Sect. 2.1.4) has often been seen as a radical remedy to the problems of democratic representation (Graham, 1982, 135; Levine, 1981, 141; Marx & Engels, 1871/1958, 580; Wolff, 1970/1976, 29–31). The paradoxes related to all two-stage procedures show us the limits of this solution. *A fortiori*, the paradoxes may also emerge in "pyramidal" models of participatory democracy envisaged by MacPherson (1977, 108–115) and Norman (1987, 165–168).

The following table illustrates May's Theorem by summarizing the basic properties of some voting rules used in dichotomous cases:

	SN	WN	SM	WM	D	AN
Majority rule	1	1	1	1	1	1
Two-stage majority	1	1	0	1	1	0
Double majority	0	0	0	1	1	0
Majority-unanimity	0	0	0	1	1	0
Majority with a *quorum*	0	0	0	0	1	1
Asymmetric supermajority	0	0	1	1	1	1
Symmetric supermajority	1	1	0	1	0	1
Lottery	0	1	0	1	1	1

Criteria: *SN* strong neutrality satisfied, *WN* weak neutrality satisfied, *SM* strong monotonicity satisfied, *WM* weak monotonicity satisfied, *D* decisive, *AN* anonymous

Two-stage majority means that the electorate is divided into groups which choose their representatives by using majority rule and the representatives use the same procedure. *Double-majority* means that both a majority of voters and a majority of voter-groups are needed for a positive decision[20]; *majority-unanimity* means that majorities in all voter-groups have to support a proposal; *majority with a quorum* means that the acceptance of a proposal requires the participation of a fixed number of voters.[21]

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[20] In the Australian and Swiss federations, this principle governs the use of nation-wide constitutional referenda. In order to become a law, a proposal has to win a nation-wide majority of votes as well as a majority in a majority of the separate states or cantons. Because of the second requirement, a minority can prevent a proposal. If the sub-units are of different sizes, this minority may be *very* small. In Switzerland, the theoretical minimum is 9 % of those who vote (a 51 % majority in the smallest cantons).

[21] *Quorum* requirements are sometimes applied in referenda. In the German States and in Hungary, a proposition is accepted only if at least 25 % of the eligible voters vote *for* a proposition; in Denmark 3/10 of voters have to support the proposition (2/5 in constitutional issues;, in Belarus, the support of a majority of all eligible voters is required. In Italy, Portugal, Romania, Moldova, Slovenia and Slovakia, more than a half of the electorate has to participate. Some countries define

2.2.4   Conclusion

Contrary to some critics, I think that May's Theorem is able to capture some of our deep-rooted intuitions about the fairness of the simple majority rule. The content of May's formula is roughly: procedural equality plus active citizen power equals majority rule.

May's theorem has a quite unique status in the theory of social choice. Unlike almost all important results, it is an existence theorem: it shows that the majority principle, and only it, satisfies some criteria of a reasonable decision-rule. However, it holds when (i) there is one single decision to be made, (ii) there are only two decision-alternatives and (iii) there is one single "electorate". In this, and only this special case, we can "compare numbers to numbers" without complications. Any departure from this simple setting leads to difficulties. The compound-majority problems (which depart from the condition (i)) are, in a sense, more fundamental than the better-known problems created by the presence of three or more options. We shall return to the compound-majority problems in Chap. 6.

We have seen that we cannot do without impersonal, mechanical decision procedures. The majority procedure has been historically successful. This success has certainly something to do with its logical properties. There are, however, at least four influential arguments against its use (see e.g. Offe, 1985, 259–299; Risse, 2004; Sadurski, 2008, 45–53; Saward, 1998, 68–86). First, there is the traditional objection based on an unequal distribution of competence and knowledge. As we saw in Sect. 2.1 the history of the majority principle is largely a history of that criticism.

Second, there is the other traditional objection that majority rule may become a majority tyranny. In the extreme case, majorities may deprive the basic political rights and even abolish the majority principle itself. In Sect. 2.2.2 I argued that although there is a presumption for majority rule in political contexts, the protection of the democratic process may justify the use of other decision-rules. Third, there is the problem of *permanent* minorities (and majorities). Even if a majority were willing to respect the political rights of minorities, it might still treat minorities unfairly, ignoring their specific values and interests. If the dominant majority is also permanent in the sense that it is based on some stable pre-political differences (for example on ethnic or religious divisions), one may ask what rational reasons those in a permanent minority position have to obey the democratic procedures. To illustrate the problem, let us suppose that there is community of ten people. Within the community all decisions are made by using majority rule. All members are allowed to participate, to speak, to make proposals and to vote; there is no "majority

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a *quorum* even for general elections (for example Thailand, Serbia, Russia, and Ukraine). If the voting turnout is not the required (usually, 50 % of the eligible voters) the proposition is rejected, or, in general elections, a new election has to be arranged. There is relatively little theoretical discussion on *quorum* requirements (see, however, Vermeule, 2007 and Laruelle & Valenciano, 2011), although they may have significant effects on decisions.

tyranny" in the traditional sense. However, *every* decision is made by six votes against four, and the same people form the majority and the minority in *every* case. The will of those four in minority never prevails. They have no influence on the outcomes; in effect they might as well be disenfranchised.

The fourth classical problem is that of *intense* minorities. In the words of Robert A. Dahl: "What if the minority prefers its alternative much more passionately than the majority prefers a contrary alternative?" Both utilitarian considerations (Lewin, 1988) and considerations related to fairness (Jones, 1988) seem to require that the intensity of preferences should at least sometimes be taken into account.

While all four classical criticisms are relevant, none of them constitutes a real objection against the use of the majority principle. The problem is that in politics we need general procedures. To put it simply, the competence objection can be taken into account only if there were a generally recognized method to test the competence of decision-makers. The problem of permanent minorities and the problem of intense minorities could have institutional solutions only if we could identify the relevant minorities and their interests in an unambiguous way, compare the relevant intensities and agree on what would constitute a fair treatment of the respective groups. In some contexts, these requirements can be satisfied. There are reliable, acknowledged ways to choose the experts within organizations or to distribute burdens and benefits fairly within schemes of mutual cooperation. In politics, however, all attempts to find an institutional solution to the problems are bound to remain controversial. In the words of Jeremy Waldron (1999b, 117), a society needs a mechanical procedure because recourse to any substantive procedure would *reproduce*, not *resolve*, the decision problem in front of us.

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Chapter 3
On Voting

3.1 A General Taxonomy of Democratic Social Choice Rules

Majority rule "works smoothly" when there are two and only two alternatives or candidates. In modern party-guided democracies, however, there are normally several lists or candidates running, none of them commanding a majority support. For example, in only 15 of 201 elections in 22 Western countries in the period 1945–1975 did one party get a majority of the votes cast (Rose, 1978, 200). This development is a relatively recent one. Although political factions did operate in ancient Athens, in the medieval Italian republics, and in eighteenth century Swedish and British parliaments, the continuous presence of several, competing candidates and political programmes is a new phenomenon. Before the extension of the suffrage and the emergence of Socialism in the late nineteenth century, most European parliaments had only two parties—or no parties at all. Up to the second half of the century, about half of the parliamentary constituencies in Denmark and in the United Kingdom had uncontested elections. In two countries using the double ballot or runoff mechanism, Belgium and Germany, a second ballot was needed in fewer than 10 % of constituencies (Caramani, 2003). As late as 1877, there were only two competing candidates in almost all constituencies in the French parliamentary elections. Only in the last part of the nineteenth century, voting rules really became a politically important issue.

3.1.1 Aristotle's Problem

What does "majority rule" mean when the choice has to be made from a larger set of alternatives? Consider a real-life example. In 1999, after the abdication of Indonesia's long-serving dictator, Suharto, and the temporary presidency of

Mr. Habibi, the Indonesian Parliament had to choose a new president for the country. Originally, there were three candidates. The Indonesian Parliament, which had loyally prolonged the tenure of Suharto several times, faced a new situation:

> According to the Constitution, the president is elected by the supreme legislator, the 700-member *Majelis Pernusyawataran Rakyat*, MPR, with "most votes" (*suara terbanyak*). The expression is so vague that the assembly has to decide, before the election, whether a plurality or a majority of votes is required. (. . .) The MPR is likely to accept the proposal of the Election Committee, according to which an absolute majority of the votes cast is needed for an election. This may mean more than one ballot, and possibly a dark horse, if the groups are not willing to compromise. (*Kansan Uutiset*, 20th October 1999, my translation)[1]

When there are more than two candidates or proposals to be considered, the meaning of "majority rule" becomes ambiguous. This problem was first noticed by Aristotle. In *Politics* he mentions Hippodamus's suggestion that judges should not simply give an acquitting or condemning verdict but should express more complex judgements, and comments:

> Will there not be confusion if the judge thinks that damages should be given, but not so much as the suitor demands? He asks, say for twenty *minae*, and the judge allows him ten *minae* (or in general the suitor asks more and the judge allows less), while another judge allows five, another four *minae*. In this way they go on splitting up the damages, and some will grant the whole and others nothing: how is the final reckoning to be taken? (*Politics* II.8. 1268a)

In a sense, Aristotle's question is the main subject of this study. *When there are more than two options, how is the final reckoning to be taken?* The modern problem of social choice actually begins here. As the German sociologist Georg Simmel remarked, number three seems to be the magic number in social relations. In economic contexts, the presence of three or more actors makes competition possible, and is also the potential source of externalities. In politics, it allows coalition making, balance of power, external enforcement of contracts, third-party mediation—and majority voting. Equally, the presence of three or more candidates or options permits and requires the use of more complex decision methods. In order to solve Aristotle's problem, committees and legislative assemblies developed increasingly complex methods which allowed the expression of other than the first preferences. But what is the proper method? What weight should be given to the lower preferences? Some important observations were made by legal and political theorists such as Nicolaus Cusanus (1434/1995, 303–305), Samuel Pufendorf (1688/1934, 988–993), and Adam Smith (1763–1764/1978, 290). But as with many other problems, any real progress in the treatment of the problem of multiple options was made only when people learned to apply mathematical

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[1] The Superior Electoral Tribunal of Brazil had to face a similar problem of interpretation in 1951. According to the 1946 Constitution and the 1950 electoral code, the President of the Republic was to be elected according to "the majority principle". The Tribunal decided that a plurality would be sufficient.

methods. The first time, this was done by two French noblemen, Jean-Charles de Borda (1781/1995) and the Marquis de Condorcet (1785/1995, 1788/1995).

Generally, we may distinguish at least eight different main types of solutions to Aristotle's problem, different ways to "compare numbers to numbers" when there are several possibilities or candidates. First, when there is no majority winner, we may simply take a second ballot, a third one, and continue thus, hoping that a majority is finally reached. Second, we may favour some specific alternative; for example, prescribe that without the required majority the *status quo* prevails. Third, we may arrange several ballots but *eliminate* alternatives successively so that (at least) in the last ballot there are only two alternatives, and the absolute majority rule can be applied in making the final choice. Fourth, we may compare the *sizes* of different minorities and use the plurality (or "relative majority") criterion, possibly with some further qualifications. Fifth, we may apply the absolute majority criterion to some or all *pairs* of alternatives and use the resulting information for picking the winner. Sixth, we may ask voters to *rank* some or all the alternatives and use this additional information as the basis of choice. Seventh, at least sometimes we may choose more than one candidate. Finally, we may use some combination of the aforesaid methods.

In the empirical literature on elections and voting, electoral systems are normally classified as *proportional* (PR), *majoritarian* and *mixed*. However, many rules in actual use are not intended to give proportional results but, nevertheless, they cannot be classified either as majoritarian or as mixtures of the two principles. The social choice literature—which is mainly concerned with methods used to choose a single alternative or to rank a set of alternatives—voting rules are classified as *majoritarian* and *positional*. Majoritarian rules are based on pairwise majority comparisons between alternatives, while positional rules compare them "globally" and use at least some information about voters' wider ranking orderings. Many real-life rules are neither purely positional nor purely majoritarian. Some of them are not based on majority comparisons, but the majority criterion ($>N/2$) nevertheless plays some role in determining the winner. In spite of the embarrassing variety of rules, the majority rule still retains its privileged position in democratic decision-making. With the exception of the qualified majority rules (nowadays used mainly in the constitutional contexts), all the rules mentioned below are reduced to the simple (absolute) majority rule when the number of alternatives voted on is two. In the cross-tabulation below, the criteria of classification are (i) how much information is asked and (ii) how it is used.

	Majoritarian	Positional and semi-positional
Only first preferences counted	Majority rule, qualified MR's	Plurality, PR-rules
Some lower preferences counted	Successive, amendment	Runoff, alternative, approval, Bucklin
All preferences counted	Condorcet-extensions (*all* pairwise majority comparisons)	Borda, Nanson, point-counting, utilitarian

A more detailed description of these rules is given below; their mechanics will be studied in subsequent chapters of this book. I have included only rules that are either actually in use in democratic states, or have been subjects of serious political discussion, or have some historical interest. Numerous rules proposed in the more technical literature on social choice are ignored or just mentioned.[2]

As we have seen, there is nothing inherently democratic in the practice of voting. In the contemporary world, stockholders' meetings, international organizations such as the United Nations or the IMF, aristocratic, judicial, clerical, and oligarchic organizations may all resort to voting in the case of disagreements. The medieval and early modern collective decision-making bodies were not democratic in any sense, and even the Supreme Soviets of the Socialist states and the Grand Council of the Italian Fascists had their voting rules. The details of non-democratic voting rules need not be irrelevant. For example, the unanimity rule adopted by the four-man military junta of Chile in its internal decision-making somewhat constrained the dictatorial powers of General Pinochet. The main subject of this work, however, is *democratic* voting. More specifically, I shall concentrate on the democratic organization of the State. Thus, I shall largely ignore both those state-level and international arrangements that make no claim to be democratic, as well as private organizations, democratic or not. At the state-level we have to deal with five contexts of democratic decision-making: voting in representative assemblies and committees, in general elections, in referenda, in political primaries, and in constitutional choices. Rules used in referenda and plebiscites are treated separately, in Sect. 3.4.

3.1.2   Parliamentary Voting Rules

Amendment Rule When there are more than two alternatives, majority rule is applied to *pairs* of alternatives in some predetermined order. The winner is set against a new alternative, and in the final ballot, against the *status quo*. This method is used is the parliaments of the English-speaking countries, as well as in the General Assembly of the United Nations. In the Finnish, Swedish (since 1866) and Swiss parliaments, a slightly different variant is used: alternatives are ordered on some pre-determined dimension, and the first ballot is arranged between the "most extreme" proposals. In the last ballot, the winner in the earlier round is pitted either against the "centrist" alternative or against some privileged alternative (for example, the government's proposal). The amendment rule seems to have developed in the English House of Commons in the sixteenth and seventeenth centuries. However, Levmore notices how something like the amendment rule was used in ancient Athens: "In electing a board of ten, if the first candidate put forward was accepted, then a new candidate could be named in which case people made a choice

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[2] For example, of the 43 voting rules examined by Warren Smith (2006), only eight have been used—or even seriously considered—in actual decision-making outside laboratories.

between the two by a show of hands, after which another could be proposed, and so forth" (Levmore, 1989, 976).

Serial (or Successive) Rule This is another extension of majority rule. All proposals are voted on one-by-one in some specified order until one of them wins a majority or the list is exhausted. If no proposal gets a majority, the *status quo* prevails. The successive rule is used in most Continental parliaments and in the European Council. Again, there can be different rules to determine the voting order. Some possible variants: amendments are considered in the order submitted (for example in the Parliaments of Portugal, Bulgaria and Costa Rica); by addressing the largest changes first (Italy); by first considering proposals to delete portions of the main motion (France); in the reverse of the order submitted (South Korea); in the order of first preference support (Denmark); or as the presiding officer decides (Fiji).[3] In Italy and Mexico, there is an additional ballot in which the winning alternative has to be put against the *status quo*.

Another context in which something like the serial rule is used is investing a cabinet or choosing a prime minister in parliamentary systems. In this context there can be no resort to the *status quo* as the default option: thus, if no proposed coalition or candidate receives over half of the votes cast, the final choice is often made by using the plurality rule. Most versions of majority rule—including qualified majorities and unanimity—presuppose a default option which becomes the result if no other alternative has the required support. Usually, the default option is the *status quo*. But in the elections of officials, the common conception is that the rules should not favour any specific candidate. Hence, we need some other method to deal with situations involving more than two candidates. Nevertheless, some election rules— for example the one used in the presidential Electoral College in the USA—require a majority for a choice. Without an additional default rule, the rule is non-decisive (in the sense discussed in Sect. 2.2.1). If the required majority is not reached, either a new ballot is taken between the same candidates (as is the case in the presidential elections in Kosovo, Turkey, and Slovakia), or the choice is transferred to another body (as in the presidential elections of the USA and Estonia).

3.1.3   "Plurality-Like" Election Rules

In general and local elections of officials, the variation is much larger than with committee rules.[4] Historically, "plurality-like" rules have been in use for centuries.

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[3] Levmore (1989, 1030), Rasch (1995, 519). The latter source misclassifies some cases as instances of the amendment rule.

[4] Sources used in Sects. 3.1.2–3.1.4 include Bergoungnous (1997), Butler (1981), Blais and Massicotte (1996), Carstairs (1980), Colomer (2001), Cox (1997), Farrell (2001), Hoag and Hallett (1926), Lakeman and Lambert (1964), Nohlen (1969).

They are simple to operate, and from one point of view, natural extensions of the familiar majority principle (The term "plurality-like" is, of course, rather inexact.).

Plurality Rule (Relative Majority; First-Past-the Post) The candidate who is ranked as first by the largest number of voters is elected. The historic roots of the rule are unknown, but examples of it can be found from classical Greek and Roman sources (Levmore, 1989, 975), and the rule is mentioned in the Canon Law as early as 1222. As Adam Smith noted in his *Lectures on Jurisprudence*, it has rarely been used in committee decision making; an exception being multimember courts and some other collegial bodies. In the nineteenth century, it was certainly the most popular rule in general elections. Nowadays, the plurality rule is used in parliamentary elections in 52 states and territories (mostly in former British colonies); 13 countries use it in presidential elections.

The version of plurality in which there are several vacancies and voters vote for a list of candidates rather than for an individual, is known as the *unit rule* (sometimes: 'party block vote'). This version of the plurality rule is used in electing the Electoral College in the US presidential elections. In Georgia (US), the Democratic Party used a version of the unit rule in its primaries: each county was allotted a number of votes equal to twice the number of its representatives in the state legislature. The candidate receiving a plurality of the county's popular votes received all these "unit votes". A majority of unit votes was needed for a nomination. In the absence of a majority, a runoff was held (Key, 1950, 419). In parliamentary elections, the unit rule has been used in Bulgaria (in the 1920s), in Djibouti, and in some or all constituencies in Singapore, Tunisia, Ecuador, and Senegal. In Mali, there is a runoff between the top two lists. Typically, the unit rule has been an instrument for the ruling parties to cement their power. Thus in the parliamentary elections of Djibouti (2003), the leading party won all the seats with 62.7 % of votes, while in Singapore (1991) the leading party received 95 % of seats with 61 % of popular vote.

When plurality is applied to the election of several candidates, but every voter votes only for one candidate, the rule is known as the *single nontransferable vote* (*SNTV*). This version of plurality was first proposed by Saint-Just to the French National Convention in 1793. It has been used in the parliamentary elections in Japan (1948–1993), South Korea, Thailand, Taiwan, Jordan, Malawi, and Vanuatu, and it was adopted in the 1912 Constitution of the Republic of China. In countries having a proportional representation, system it is sometimes used in allocating seats inside party lists.

When several candidates are to be elected and voters can vote for as many candidates as there are vacant offices and split their votes among different lists, the rule is called (*unlimited*) *multiple vote* (sometimes: 'block vote' or 'at-large-elections'). If voters are not willing to split their votes, it works like the unit rule, letting pluralities elect all office-holders. The multiple vote was favoured by the US municipal reformers beginning in the 1890s and used to be common in the US local elections.

When every voter has more than one vote but fewer than there are vacancies, the rule is called the *limited (multiple) vote*. Although there have certainly been even earlier instances of rules of this type, it was defended for the first time by G. L. Craik, a professor in Belfast, in 1831. Limited-vote rules used to be common in local elections in English-speaking countries and in some parliamentary constituencies in Britain (1867–1885), as well as in Malta, Portugal, Spain, Italy, Brazil and Chile at the end of the nineteenth century. Nowadays, these rules are used for electing the Spanish Upper House, in the parliamentary elections of Bermuda, Fiji, Kuwait, Laos, the Maldives, Mauritius, the Isle of Man, the Philippines, the US Virgin Islands, and were earlier use in Jordan (up to 1982) and Mongolia (up to 1992). In the United States, the limited-vote was still in use in the 1990s in a number of local elections (Alabama, Connecticut and Pennsylvania). Limited vote is occasionally combined with a *limited-nomination rule*: a party is allowed to nominate fewer candidates than there are seats to be filled. This limitation may have a significant effect on the outcome. In Argentina, for example, the electoral law (the Saez Peña-law) required that if there were several seats to be contested in a district, a party could nominate candidates only for two-thirds of the seats, and every voter had an equal number of votes. This practice ensured that the plurality winning party invariably gained two-thirds of the seats in Parliament, the next largest party taking the rest. Some organizations—for example, the Meretz alliance in Israel—use a rule which gives every voter more votes than there are seats to be contested (*surplus vote*), so that some votes are inevitably "wasted".

Approval Voting   Each voter casts a vote for all of the candidates she approves. The one with most votes wins. Some prominent theorists of social choice are active proponents of this rule (see Brams & Fishburn, 1983); they have also been credited as its inventors. However, the basic principle is very simple and can be found from many sources. In his classic paper, E. J. Nanson (1882/1995) mentions a version (the "Venetian rule") in which voters could approve their two most favoured candidates and a runoff was arranged between the top two. In papal elections the cardinals could, before 1622, approve of several candidates; in the first four presidential elections of the United States, the electors voted for two candidates (Nagel, 2007, 44). In the former Socialist states, voters could cross out the names of those candidates of which they did not approve, so the rule was essentially a version of the approval vote. If a candidate did not get an absolute majority of votes, a new election had to be arranged. Because of the Communist candidate monopoly and the usual single-candidate lists, the rule had very little practical effect. However, in the last elections in the Soviet Union and in Communist Poland, voters were in many constituencies allowed to have a genuine choice. In several cases, no candidate passed the 50 % threshold and a runoff was needed. The rule used was, then, a slightly different version of the approval vote. Later, all ex-Communist countries have opted for some other electoral system. Nowadays, approval voting is used mainly in private organizations (for example, in the presidential primary of the Finnish Social Democratic Party in 1993). Recently, it has also been used to elect the Secretary General of the United Nations.

Double-Simultaneous Voting   Voters vote for one candidate. All candidates stand on party lists and the votes cast for candidates on the same list are pooled. The winner is the most popular candidate of the most popular party list. This rule was used in single-office elections in Uruguay and Honduras (Morgenstern, 2001). A somewhat similar rule is used in the mayoral elections of Wallonia since 2006: candidates receiving most preferential votes from the lists winning most seats in local elections become mayors.

Plurality Runoff   The most common version of this rule (referred to as the *strong double ballot* by Sartori (1997)) is the following. The first ballot is arranged between all candidates. If there is no majority winner, the next ballot is arranged between the two candidates with most support. The plurality runoff is one of the oldest methods to choose officials (see for example Guicciardini, 1524/1994, 130–131). Its probable roots are in the electoral practices of the Church. In the papal elections, if no two-thirds majority was obtained, it could be achieved without repeating whole the process if some of the electors gave an extra vote for another candidate in an additional ballot. This candidate must have received votes during the first ballot. This procedure (*accessus*) was already customary in the thirteenth century (Herde, 1985, 42). The plurality runoff was established in the French Revolution as the method of choosing the members of the General Assembly. Since the Revolution, France has applied it in different forms. Before the First World War, the plurality runoff—in its weak or strong forms—was used in the general elections in the Netherlands, Germany, Austria, New Zealand, and Norway. In *multi-member constituencies* it was also used in the Belgian, Luxembourgian, Italian, Spanish, and Swiss parliamentary and local elections and is still in use in the French local elections. In these multi-member systems, voters had as many votes as there were seats to be filled (in Switzerland, there were three ballots until 1900). In Iran, every voter has one vote, and candidates receiving most votes are elected. If there is an insufficient number of candidates passing the threshold—25 % of all votes—a runoff is arranged between those candidates who are nearest the threshold. In 2010, 21 states and territories elected their first chambers by using some version of the plurality runoff, and 43 states elected their presidents by the same procedure. Twelve states in the USA have used it in primary elections since 1902.

Generally, runoff-rules can be characterized by five components: (i) the number of votes allocated to a voter, (ii) the number of candidates allowed to the second (or further) round, (iii) the number of rounds, (iv) the number of candidates elected in the final round, and (v) the criterion of choice in the final round. In this text, I shall mostly use the term "plurality runoff" for the version in which every voter has only one vote, there are only two rounds, in the second round there are only two candidates, and only one of them is elected by the majority principle. But there can be more than two rounds, and sometimes more than just the two top candidates are allowed to run in the second round, so that the final criterion for election is plurality (relative majority) rather than absolute majority. For example, in the French parliamentary elections, any candidate receiving more than 12.5 % of votes goes

to the second round, while in Hungary the threshold is 15 %. Following Sartori, I call these *weak* runoff-rules.

Parliaments and other representative bodies use various runoff rules in electing the presiding officers and in the indirect elections of the Heads of States. The standard, "strong", two-ballot runoff is probably the most common version. However, a weak runoff with two ballots is used for example in the parliaments of Luxembourg, Paraguay and Peru and in most French-speaking African countries. Elsewhere, *multiple ballot runoffs* are used for the same purpose. In France, Belgium, Lebanon and Morocco, the maximum number of ballots is three and plurality prevails in the last round; in Denmark, Norway and Sweden there are also three rounds, but in the last round there are only two candidates. In the Netherlands the maximum number of rounds is four, in Greece (presidential elections) it is six, and in Italy, there is no upper limit—in 1971, 23 rounds were needed (Bergoungnous, 1997, 18–20; Rasch, 1995). In the (direct) presidential elections of the Weimar Republic, new candidates could be introduced between the rounds. Rules of this type are called "strong-weak double ballots" by Sartori. In the weakest version of runoff, there is no threshold of admission to the second round and the first round works like a straw poll.

A version not discussed by Sartori is *qualified plurality*: the runoff is arranged only if no candidate passes some predetermined threshold (other than 50 %). In the presidential elections of Costa Rica, in the Mongolian (1996–2004) and Georgian parliamentary elections, and in some primary elections in the United States and Uruguay, only a plurality exceeding a given threshold (25, 30, 33.3, 40, or 45 % of all votes) is needed for a victory in the first round. The 1933 constitution of Peru required a plurality in presidential elections, provided the leading candidate gets no less than a third of the votes; if two candidates get one-third, the choice is made in Parliament. In the parliament of Cyprus, an absolute majority is required for the election of the Speaker in the first ballot. In the second, 40 % is enough; if that is not reached, plurality is sufficient for the third round. In the USA, a direct election by a qualified plurality rule (40 %) has often proposed as an alternative to the present indirect election of Presidents (Longley & Braun, 1975). Some direct presidential elections combine the threshold with a *distance condition*. The Argentinean constitution requires a runoff, unless the winner has either a 45 % plurality or 40 % plurality coupled with at least a 10 % lead over the strongest challenger. In Nicaragua, the corresponding conditions are 40 % or 35 % plus a 5 % lead over the next, while in Ecuador the requirement is 40 % of the vote and a 10 % lead over the main challenger.

Sometimes, the threshold is higher than 50 %: in Sierra Leone, a runoff is arranged if the winning candidate in the presidential elections fails to get 55 % of the votes, while in Azerbaijan, the threshold is two-thirds of the vote. In Nigeria, Kenya and Indonesia the rules used in presidential elections require for victory a nationwide plurality plus at least 20 or 25 % of the votes in a majority of the districts; otherwise a runoff is arranged. In Senegal, a victory in the first round requires a majority of votes plus the support of at least 25 % of the eligible voters. In the election of the leader of the UK Conservative party a win on the first ballot

required an absolute majority of the votes cast plus a 15 % lead over the nearest rival. In 1975 the rules were changed so that on the first ballot an absolute majority of eligible voters was required, while on the third ballot a plurality was sufficient. In some parliaments, a qualified majority is needed for electing the presiding officer or the Head of the State; for example, in Italy, Turkey, Kenya and Kosovo (and South Korea, 1948–1952 and 1960–1961), it is required in the first two ballots, while in the third, an ordinary majority is sufficient. In Chad, the rule requires a two-thirds majority in the first, a three-fifths majority in the second, and an ordinary majority in the third ballot. These different versions of the runoff have a dynamics of their own. What is common for all versions is that they leave some room for negotiations and bargaining *between* the ballots, while in other systems all bargaining has to be conducted before election.

In *exhaustive voting* there are as many runoffs as there are candidates, minus one. In every round, the candidate with the smallest number of votes is eliminated. This latter version is used in electing the Deputy Leader of the British Labour Party and the leader of the Canadian Conservative Party, the party leaders in the US House of Representatives, the presiding officers in the Swiss, Australian, New Zealandian and Singaporean Parliaments, and in the International Olympic Committee for choosing the site of the next Olympic Games. The "plurality-like" voting rules may be classified in the following way (*n* being the number of seats):

Rules	Number of seats	Votes	Rounds
Simple plurality	1	1	1
Limited vote	n	$1 < x < n$	1
Multiple (unlimited)	n	n	1
Surplus vote	n	$x > n$	1
SNTV	n	1	1
Unit rule	n	1	1
Approval	1	$1 < x < n$	1
Venetian	1	2	2
Plurality runoff	1	1	$y > 1$
Multi-seat runoff	n	$1 < x < n$	$y > 1$

3.1.4   Preference Rules

What "plurality-like" rules have in common is that voters are not asked to *rank* candidates. Some of them allow voters to vote for more than one candidate, but not to put the candidates in a preference-listing (If there is more than one round, some amount of information about voters' other preferences is actually used.). In contrast, the rules belonging to the family of "preference voting"—another vague term used for many different systems—ask voters to list candidates according to their preferences. Although we have no detailed knowledge about the early

developments of "plurality-like" rules, it is easy to see how they might have been evolved from the simple majority rule. When there were more than two candidates, none of them commanding an absolute majority of votes, it must have appeared quite natural either to arrange a new ballot, or to solve the problem by comparing the sizes of different minorities. Rules which utilize more preference information are bound to be relatively complex to use and they require more calculation; the same holds with the proportional representation systems. Both types of rules are mainly products of the nineteenth century. Their development is essentially connected with the emergence of modern party politics: the preconditions for their use are that there are many competing candidates, officials are able to perform the required counting operations, and voters are able to make relatively sophisticated judgments.

The Alternative Vote (AV) Voters are asked to rank all the candidates in order of preference. In the first stage, only the first ranks are counted. If a candidate has an absolute majority, he or she is elected. If not, the candidate who has the lowest number of first ranks is eliminated, and the second ranks of those voters who ranked the eliminated candidate as first are added to the totals of votes of other candidates. Again, if there is a majority winner, he or she is elected; if not, the candidate with the lowest number is eliminated, and votes are transferred to other candidates, until a majority winner is found. In a sense, the process simulates runoff elections. With only three candidates, it treats voters' preferences like the ordinary plurality runoff; with more candidates, it treats them like exhaustive voting. However, the "dynamic" properties of the preference rules and the runoff rules are quite different. In runoff elections, candidates have an opportunity to change their campaign tactics and voters may reconsider their positions between the elections. The essentials of the alternative vote system were presented (and dismissed) by the great Marquis de Condorcet. W. R. Ware, a professor at Harvard College, gave the first detailed presentation of the system in his letter to Thomas Hare in 1871. Partly due to the influence of E. J. Nanson, a mathematician and pioneer of social choice theory, AV was adopted in Western Australia in 1907. Later, it has been used in some primary elections in the USA, (Maryland and Minnesota), local elections in Australian provinces, in British Columbia, Alberta, and Manitoba, and in the national elections of Papua-New Guinea, Fiji, and Zimbabwe. Currently, the alternative vote is used in the election of the Lower House of Australia, in Irish by-elections, and in electing the President of the Republic of Ireland. The *limited version of AV* allows voters to submit only their first and second preferences. As with the standard AV, and unlike with the supplementary and contingent vote (see below) candidates are eliminated one-by-one (Lusch, 1907).

AV has also been used in *multi-member constituencies* (Australian Senate 1919–1948, South Australia 1929–1935, Nauru 1951–1971). In effect, it is a preferential version of the unlimited ('block') vote. Its effects are summarized by Reilly (2001, 16)

> The use of AV in multi-member districts effectively requires each seat to be filled by a separate election, but with the same electorate voting at each. While the first vacant seat is filled in the same way as a single-member AV election (...), for the successive seats the ballots showing a first preference for an already elected candidate are transferred to the remaining candidates before the seat is filled. In effect, this means that under conditions of party identification and disciplined voting patterns, the same party can easily win every seat with a bare majority of the vote.

A more common version of the alternative vote-method applied to multi-member elections is called the *single transferable vote* (STV or Hare) -system. In the multi-member case, a *quota* has to be defined. Every candidate whose first-preference votes exceed the quota is elected; the surplus of his/her votes are transferred to hitherto unelected candidates in proportion to their appearance in second place on all ballots for the winner. If another candidate exceeds the quota after this transfer, he or she is elected, and the transferring process is repeated. If no candidate has the sufficient amount of votes at any point in the process, the candidate with the fewest first-preference (and transferred) votes is eliminated, and all ballots for him or her are transferred to candidates in the second place of those ballots. This process is repeated until all seats are filled. In a simplified form, this system was proposed by Thomas Wright Hill in 1821, and was applied for the first time in public elections in Adelaide in 1839. More complicated versions were invented by a Dane, C.C.G. Andrae (1856), and by Thomas Hare (1857). Nowadays, it is in use in Ireland, Malta, Tasmania and Northern Ireland, in local elections in Scotland, and in the elections of the Upper Houses in Australia, Nepal, New South Wales, South Australia and Western Australia. It has also been used in some local elections in the USA, Canada, New Zealand, and in some British colonies. In the beginning of the twentieth century, Denmark, Costa Rica, and the province of Moravia in the Austro-Hungarian Empire experimented with STV but rejected it (Hoag & Hallett, 1926). In the English-speaking world, many organizations (for example, the Irish parties and the British Labour Party) use STV in their internal elections. It should be noted that there are different ways of conducting the transfer of votes (Tideman, 2006), and that these apparently small differences may actually have an effect upon the result. *The Coombs rule* works like AV, but instead of eliminating candidates with the fewest first-place votes, it proceeds by eliminating candidates with the most last-place votes, until the first-place majority-winner is found.

The Supplementary Vote (SV) This rule was proposed by the Plant Committee on Electoral Reform, set up by the British Labour Party. In single-member constituencies, voters are allowed to express their first and second preferences (or, as in Sri Lanka, first, second and third). If no candidate gets a majority of the first preference votes, all other candidates except the two who have the largest number of first-preference votes are eliminated and the second preference votes added to their vote totals. Whichever of the two remaining candidates has more votes after the transfers is elected. The rule was first used in electing the Mayor of London in 2000, and then the mayors in 11 other British towns. In the communal elections of Norway (1999–2007), it was used for the same purpose. Although the Plant Committee seems to

have re-invented the supplementary-vote system, it is not entirely new. It was in use in the Democratic primary elections in Alabama (1915–1931) and is still used in electing the president of Sri Lanka. In the United States, several electoral reformers have proposed a version known as the *contingent vote*. The voters are free to express their full preference orderings, or at least rank more than two candidates. If there is no first-preference majority, all other candidates except the two who received the largest numbers of first-preference votes are eliminated. Unlike with the supplementary vote, the lower-preference votes of those voters who voted for the eliminated candidates are transferred to one or the other surviving candidate. The contingent vote has been used in Queensland and New South Wales (Reilly, 1997a), and in the Democratic primary elections of Idaho, Florida, Wisconsin and Minnesota (Merriam & Overacker, 1928, 84). In Washington, the rule used in primaries simulated a qualified runoff: second choices were taken into account only when no candidate received at least 40 % of the first preference votes. Although AV, SV, and the contingent vote look quite similar (and with three candidates, they are, indeed, equivalent) they may actually produce different outcomes. The main difference between the similar-looking contingent vote and supplementary vote is that under the latter, it is possible to "waste" one's vote totally by voting two candidates who are both eliminated (see Sect. 3.2.4).

The Bucklin or the Grand Junction Rule (Even: 'Mary Ann voting')   As in alternative vote, every voter writes down her full preference ordering. First, the first preference votes are counted. If a candidate is supported by more than 50 % of all voters she is elected; if not, the second, the third etc. preferences are counted until some of the candidates reach a majority. There is no elimination process. If more than one candidate passes the majority limit in the same counting, the one with the largest number of votes is the winner. This rule was first used for public elections in Grand Junction, Colorado, in 1909, and after that, in 55 cities. It was also used in the election for the Directors of the Federal Reserve (Hoag and Hallett, 1926; Schulz, 1949). In spite of its name, the rule was not invented by Mayor J. W. Bucklin, for it had already been recommended by Condorcet (1793/1847), and, according to Nanson, actually used in the eighteenth century Geneva. It has recently been re-invented by the social choice theorists and re-named as the *democratic compromise*.[5]

The Swedish Social Democratic Party and the Belgian Socialist Party have used the *top-to-bottom-rule* in their party primaries. The voters rank as many candidates as there are positions to be filled. The candidate with the highest number of first preferences (the plurality winner) wins the first position on the party's electoral list. Among the candidates who are left, the candidate with the highest number of first and second preferences wins the second position. The third place is occupied by the

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[5] The democratic compromise, unlike the classical Bucklin rule, asks voters to rank all the candidates.

remaining candidate who has the highest number of first, second and third prefer-
ences, and so on (Hazan and Rahat, 2010, 79–80).

The Borda Count This is another point-counting rule. When there are
n alternatives, every voter gives $n-1$ points to the alternative ranked as best,
$n-2$ to the next best and so on. The alternative with the largest sum of points is
the winner. The Borda count is mainly used in universities and private organiza-
tions. In Austria, the formula used to allocate seats inside party lists is a version of
the Borda count. The only country using a Borda-like system in nation-wide
elections is Nauru; however, the weighting used is different, so that the voters
give one vote to their most favoured candidate, a half to the next favoured, then a
third etc. (the so-called *Dowdall rule*). Another Melanesian country, Kiribati, used
the "classic" version of the Borda count in the nomination by parliament of
candidates to stand for election to the presidency (see Sect. 3.3.3 for an actual
example). In Slovenia, the rule is used to elect the two parliamentary representa-
tives of the national minorities. In 2003, the members of the Reform Party in
Estonia chose the candidates for the parliamentary elections by using a modified
Borda: the first position received 40 points, the second 36, the third 33, the fourth
30, the fifth 28, the sixth 26, the seventh 25 an so on. Another Estonian party, *Res
Publica*, used the standard Borda for the same purpose (Hazan & Rahat, 2010, 80).

The exact mathematical presentation of the Borda count was given by J.-C. de
Borda in 1781, but it had already been described in Nicolaus Cusanus'
Concordantia catholica (1434/1995) where it was recommended as the preferable
method to choose the Emperor. According to Antony Black (1994, 39), the Council
of Basle (1431–1449), in which Cusanus was a member, actually used a
preferential-voting rule when voting on the location of the next Council. In Bel-
gium, a preferential rule was used in clerical elections from the sixteenth to the
eighteenth century, although the weights were different: one first-preference vote
was worth of two second-preference votes or three third-preference votes (Moulin,
1958, 547). The law regulating the primary elections in Oklahoma (1925) was
based on a similar principle. According to the law, if no candidate received an
absolute majority of first-preference votes, *one half* of the number of second-
preference votes cast for each candidate was to be added to the first preference
votes. If there were four or more candidates and none of them had a majority of
first- and second-preference votes, *one third* of the number of third-preference votes
was to be added, and the candidate receiving the highest number of votes was
declared to be the nominee (Merriam & Overacker, 1928, 84–85). A rule of this
type was once used in making the nomination proposals for the chancellorship in
the Finnish universities. Each member of the electoral collegium ranked the three
most preferred candidates by giving one vote to the most favoured, half a vote for
the next favoured and one third of a vote for a third candidate. If a candidate was
ranked first by more than 50 % of the voters, he or she would be ranked first in the
nomination proposal. If there was no such candidate, the first rank in the proposal
would be given to the candidate with the largest total score. The second rank in the
nomination proposal was given to a remaining candidate who had been ranked first

by at least a third of the electorate. Again, if there were no such candidate, the one with the largest score was selected. The third rank in the proposal was in all cases determined on the basis of sum scores (Berg & Nurmi, 1988, 97).

The *vote-and-a-half* system proposed by Thomas S. Dabagh (1934) would allow the vote voters to give one vote for their favourite candidate and a half vote for the next favoured. In principle, there is a continuum of pure positional voting rules, the Borda rule and the plurality-rule being at the opposite ends. The former counts all the preferences, the latter counts the first preferences only. Between these extremes there are infinitely many possible rules which count some but not all preferences, or which weight them differently. From another point of view, the opposite pole of plurality is *antiplurality*: voters are allowed to vote only *against* a candidate. Several versions of the *negative* vote have been proposed in the literature. In these systems, voters are permitted to give one or more votes for or against one or several candidates. As far as I know, such rules have never been used in actual elections.

The Nanson Rule   First, points are given for all options according to the Borda method. The scores are counted and all options with scores of no more than the average score are eliminated. Then, the points are assigned again to the remaining alternatives. The procedure is repeated. Finally only the winner is left. This rule was invented by an early pioneer of the theory of social choice, E.J. Nanson, and applied in some university elections.[6] In public elections, it was used in the city of Marquette, Michigan.

The system which allows a voter either to give several votes to the same candidate or tally them between different candidates is known as the *cumulative vote*. It has been used in general elections in the Cape Colony, in Illinois (1870–1980), in some constituencies in Sri Lanka and Chile, in Buenos Aires (1873–1876), and is still in use in some local elections in New Mexico and Alabama. In Switzerland and Luxemburg, voters have several votes which can be cumulated, although the allocation of parliamentary seats to parties is based on a proportional formula. In the United Kingdom, cumulative voting was defended by J. G. Marshall in 1853, but already in 1850 it had been recommended by the Colonial Commission. An attempt by Robert Lowe to introduce CV into the Electoral Reform Bill of 1867 failed, but since 1870, it has been used in electing school boards. In the USA, the cumulative vote has recently gained some support as a method to ensuring representation for minorities. The cumulative vote is a simple version of *point voting*; every voter has a given number of points (say 100) which can be distributed between different alternatives according to voters' preferences. The alternative receiving the greatest total of points is selected. Point voting systems are rarely used in political contexts, but they are common when the judgments of experts are pooled, for example in juries determining winners in a contest of skill.

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[6] Niou (1987) remarks that the Nanson rule is often misstated in the social choice literature.

To summarize, various preferential rules may be described in the following way (*k* being the number of candidates):

	Preferences counted	Preferences weighed?	Elimination of candidates?	Majority rule?
Alternative vote	>1	No	Yes	Yes
Supplementary vote	2	No	*k*-2	Yes
Bucklin	>1	No	No	Yes
Contingent vote	>1	No	*k*-2	Yes
Oklahoma rule	3	Yes	No	Yes
One-and-a-half	2	Yes	No	No
Cumulative vote	>1	Yes	No	No
Borda	*k*	Yes	No	No
Nanson	*k*	Yes	Yes	Yes

Various *proportional representation rules* (still another vague term!) are discussed in Sects. 3.5.1 and 3.5.2.

3.1.5   How Rules Disagree

If there are more than two alternatives, asked Aristotle, how is the final reckoning to be taken? As we have seen, there are many possible ways to answer to the question. The number of rules in actual use is large. The number of rules proposed in literature is much larger; the number of logically possible rules is infinite. The outcomes of a voting process depend heavily on the voting rule used. As such, this is not surprising. After all, the reason why there are so many different rules is that those designing electoral rules have different aims and values, and they believe (correctly or incorrectly) that some particular rule may serve those aims and values better than the others.

In the following example, there is an electorate of a hundred voters, divided into five voter groups of different size. The voters are asked to choose a single office holder among five candidates {*a,b,c,d,e*}. The voter groups are supposed to have well-defined preference orderings among all the candidates: they can rank them as the best, the second best etc. In the example, the orderings in the columns indicate the preference orderings of voters. For simplicity's sake, we suppose that all voters have *complete* and *strict* preference orderings—in other words, they are able to rank all the candidates, and do not rank any pair of candidates as equals. Although the requirement of having complete and strict preference orderings in a set of five alternatives may be too demanding in some contexts, it is by no means an unusual one. For example, the alternative vote used in Australia is based on the presupposition that voters do have complete and strict preferences. Here, we make the further supposition that the voters vote *sincerely*, that is, according to their preferences.

This is not always the case (Sect. 4.3.2). However, if we assume sincere voting, voting rules can be seen as functions from the sets of preferences to the sets of candidates or alternatives on the agenda.

Example 3.1

21 voters	19 voters	18 voters	20 voters	22 voters
a	b	c	d	e
b	c	d	c	d
c	a	b	e	c
d	d	a	b	b
e	e	e	a	a

We can give a political interpretation for this preference configuration. Let *a* be, for example, the candidate of the Left, *b* of the Moderate Left, *c* of the Centre and so on. Then, the preferences of the voters are nicely ordered along the Left-Right dimension; there are no eccentrics marking, for example, the Rightist candidate as the first and the Leftist candidate as the second. Quite often, however, preferences are not so nicely ordered. This tends to make the things much more complicated, as we shall see (Sect. 4.2.3).

Let us compare the results produced by some voting procedures described above. The amendment rule (pairwise comparisons) chooses candidate *c*, plurality chooses *e*; runoff (the strong version) *a*, approval (two votes) *d*, Borda *c*, supplementary vote *e*, contingent vote *a*, and alternative vote *d*. Further, suppose that we have to choose more than one candidate. In this case, *collective ranking orders* become relevant. Again, different rules produce different rankings, as shown by the table:

Plurality	$e > a > d > b > c$
Approval (three votes)	$c > d > b > e > a$
Top-to-bottom	$e > d > c > b > a$
Runoff (strong)	$a > d > b > c > e$
Plurality-with-a-negative-vote	$d > b > c > a > e$
Alternative vote	$d > a > e > b > c$
Alternative vote (limited)	$d > e > a > b > c$
Dabagh (one-and-a half)	$d > c > b > e > a$
Bucklin	$d > c > b > a > e$
Borda	$c > d > b > a > e$
Pairwise majority comparisons	$c > d > b > a > e$

Even in a relatively unproblematic case like this, different—although similar-looking—rules produce different rankings. More generally, for any non-unanimous distribution of preferences, there exist different decision rules such that they will produce different outcomes. If there is a set of voters with preferences over a set of candidates {*a,b,c*}, we can always find a rule that will select *a*, another that will select *b* and a third that will select *c*.

3.1.6   The Power of Choosing a Voting Rule: Locke's Problem

According to the traditional definition, democracy is rule by the people. Assuming that "the People" rules, how are the decisions to be made? In Sect. 2.1.4 I argued that the people can exercise their power only through some "mechanical" procedure. "The people" and its "will" are institutional entities, identified only through institutional rules. But we have seen that when the number of available options is greater than two, there are innumerable alternative procedures available, and many of them are neither unfair nor irrational in any obvious sense. Example 3.1 shows how different procedures deliver the power for different sections of the people and make different aspects of their will decisive—this is the very reason why there are so many procedures. If there are more than two candidates or alternatives voted on, and if those who have the power to choose a voting rule have approximate knowledge about the preferences of voters, the power-holders may often produce their favourite outcome by choosing a suitable voting rule. The power to decide on how to decide often gives power over the final outcomes.

The selection of a decision rule is, then, not only a philosophical or logical problem. It is related to the perennial central question of political theory: the question of controlling power. To coin a slogan: *When voting in elections, the people choose their rulers; when deciding on the electoral rule, the rulers choose their people.*[7] The rulers may exercise this power at least in three ways. By limiting or extending the suffrage, they re-define the electorate, by redistricting they determine the nature and range of representation, by changing the electoral and voting rules, they change the way votes are aggregated. As the political scientist Arend Lijphart remarked: "If one wants to change the nature of a particular democracy, the electoral system is likely to be the most suitable and effective instrument for doing so". A historian confirms that

> there are ways of nullifying the effects of the right to vote and of manipulating it in the interest of certain groups or classes. In fact, much of the history both of ancient and of modern states could be written from this point of view. (Larsen, 1949, 175)

In the *Second Treatise of Government*, chapter 13, §§ 157–158, John Locke (1689/1988) discussed the way to choose the legislators. His problem was not the choice of the best voting rule, but the lack of representativeness in the House of Commons; the "rotten boroughs" which troubled the British electoral system up to the nineteenth century. Locke remarked that because the numbers of electors in the districts continuously change "it often comes to pass, that in Governments, where part of the Legislative consists of Representatives chosen by the People, that in tract of time this Representation becomes very unequal and disproportionate" (§157). But who had the right to *correct* this disproportionality? For Locke, the

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[7] Cf. Bertold Brecht's famous poem *Die Lösung*: "Wäre es da/Nicht doch einfacher, die Regierung/Löste das Volk auf und/Wählte ein Anderes?"

legislators were but trustees of the people, and their power was constrained by the trust. Hence, they could not have power over the basic constitution of the political community:

> Because the Constitution of the Legislative being the original and supream act of the Society, antecedent to all positive Laws in it, and depending wholly on the People, no inferiour Power can alter it. And therefore the People, when the Legislative is once Constituted, having in such Government as we have been speaking of, no Power to act as long as the Government stands; *this inconvenience is thought incapable of a remedy*. (§157; my emphasis)

Locke's problem is, then: *Who should have the power to decide upon those rules which distribute the basic power in a society?* As Locke's own example shows, we cannot do without such a power. Sometimes it is needed to correct an unfair distribution of power, resulting from the existing decision rules. The society itself, its territorial and ethnic composition as well as its needs and values are in constant flux. Therefore, electoral and other voting rules may also need to be changed time to time. But some apparently "small" changes in the electoral rules may change whole the balance of power. If a legislature is allowed to change or maintain the rules at its will, legislative majorities are under the continuous temptation to tinker the rules to their own benefit. Alternatively, legislative majorities may let the obvious defects and irregularities to stand because they do not want to put their own majority position into risk. According to Arend Lijphart (1984, 52) "one of the best-known generalizations about electoral systems is that they tend to be very stable and to resist change". This is at least partly explained by a self-supporting effect: those who have the power to change the rules have usually acquired the power through the very same rules.

Electoral rules are not the only rules distributing the basic power in a society. This is one of the functions of constitutions, and for this reason constitutional laws are often made difficult to change. Electoral rules may be taken from the reach of simple legislative majorities by including them in the constitutions. In several countries (for example, in Austria, Belgium, Denmark, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain and Switzerland) the basic electoral rules are determined at the constitutional level. Because constitutions are usually more difficult to change than ordinary laws, the constitutional status of electoral rules makes institutional manipulation more difficult. But if *all* the details of electoral rules were determined in constitutions, it would also be difficult to correct their defects. These defects are likely favour one group or another, and the groups thus favoured are not likely to agree on changes that would weaken their power. Thus, a dilemma emerges. Either the rules of the electoral game are easy to change and, consequently, easy to manipulate for partisan purposes or, then, they are difficult to change and their possible defects and injustices cannot be corrected. A striking example of the second horn of the dilemma is the history of the suffrage of women in Switzerland. Because electoral rules are determined in the Swiss constitution, an extension of suffrage required has to be decided in a referendum—and of course, according to the same constitution, only males were entitled to vote in it. Hence, female suffrage was rejected in a referendum in 1959. Only in

1971 did Switzerland—often considered as the model of democracy—finally give full political rights to the other half of its adult population. This happened 50 years later than in Germany and 25 years later than in France.[8]

One horn of the dilemma is that if electoral rules do *not* have a constitutional status and may easily be changed by simple majorities or by the executive, the rules may become instruments of conscious manipulation. France, for example, changed its basic electoral rules some 14 times since 1848. Between 1848 and 1919, the system oscillated between the plurality rule and the plurality runoff rule (in single- or multi-member constituencies), while from 1919 to the last reform in 1992 there was a similar movement between mixed or fully proportional rules and the plurality runoff-rule. Most of the changes were clearly motivated by partisan considerations. In 1875 the Conservatives introduced the single-member constituencies, hoping that it would preserve the Conservative majority, while in 1885 the Republicans believed that a return to multi-member constituencies would help them against the Boulangerists. In 1927 the Radicals and the Socialists replaced the mixed-PR system by a single-member runoff rule, again for tactical reasons. In 1951, the obvious aim of replacing a pure PR system by a mixed system was to weaken the enemies of the Fourth Republic, Gaullists as well as the Communists. In 1958, President de Gaulle re-introduced the plurality runoff in order to diminish the number of parties and to increase political stability (Carstairs, 1980). In 1986 President Mitterrand returned to the proportional system in order to divide his opponents at the Right. When he was replaced by M. Chirac, France returned back to its ancient double-ballot system. Some of these changes had their aimed short-term effects. The 1951 reform probably prolonged the life of the Fourth Republic; the 1958 reform, together with the other constitutional changes, stabilized de Gaulle's regime for 10 years, and Mitterrand's introduction of proportional representation fragmented the French Right in the 1980s. But institutional manipulators are not omnipotent, for radical changes in electoral rules often have unintended and undesired consequences. By reintroducing the dual ballot de Gaulle actually increased the power of parties (a development he himself despised), while the reintroduction of proportional representation by Mitterrand helped the extreme Right to establish itself as a politically important force.[9] It has often been remarked

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[8] In the small canton of Appenzell, women got their voting rights as late as 1989. The struggles for general suffrage in the late nineteenth and the early twentieth century also provide examples of the problem. The representatives elected on the basis of a limited suffrage often resisted attempts to make electoral systems more democratic and the democrats had to resort to extra-parliamentary and sometimes extra-constitutional activity. In Belgium, the introduction of general suffrage was preceded by a long and sometimes violent struggle led by the Socialists (from 1886 to 1913). After the First World War the bourgeois and the Socialist parties reached a general agreement on the need for an electoral reform. The constitution demanded new elections before a constitutional change could be accepted. Because the Socialists and the Liberals refused to accept any further elections to be held according to the old unequal electoral system, the system was finally (1919) changed in an unconstitutional way.

[9] Greece is another striking example of electoral manipulation. Between 1920 and 1980, almost all elections were conducted under different rules. From 1920 to 1936, there were five major changes

that attempts to manipulate electoral rules for partisan purposes tend to backfire. It is, however, clear that failures are overrepresented in the relevant literature: if the manipulators happen (by sheer luck, perhaps) to find a system which successfully cements their own power, no further changes are forthcoming.

To repeat: if it the power-holders have a full discretion over the decision rules, they may change or maintain them to their own benefit; if they have no discretion, the rules cannot be improved even when it would be required by reason and fairness. Locke's own solution was to include the power to change the electoral laws into the prerogatives of the executive power:

> *Salus Populi Suprema Lex*, is certainly so just and fundamental a Rule, that he, who sincerely follows it, cannot dangerously err. If therefore the Executive, who has the power of Convoking the Legislative, observing rather the true proportion, than fashion of Representation, regulates, not by old custom, but true reason, the number of Members, in all places, that have a right be distinctly represented, which no part of the People however incorporated can pretend to, but in proportion to their assistance, which it affords to the publick, it cannot be judg'd, to have set up a new Legislative, but to have restored the old and true one (. . .). For it being the interest, as well as intention of the People, to have fair and *equal Representative*; whoever brings it nearest to that, in an undoubted Friend, to, and Establisher of the Government, and cannot miss the Consent and the Approbation of the Community. (§158)

But there were obvious dangers even in this solution. For the executive may also misuse this power:

> When by the Arbitrary Power of the Prince, the Electors, or the ways of Election are altered, without the Consent, and contrary to the common Interest of the People, there also the *Legislative is altered*. For if others, than those whom the Society is authorized thereunto, do chuse, or in another way, than what the Society hath prescribed, those chosen are not the Legislative appointed by the People. (§216)

The problem is how the "public good" is to be defined. Ultimately, the test is "the Consent and Approbation of the People", which, for Locke, meant the consent of the majority of the people (§§ 95–99; cf. Kendall, 1941). But we cannot ask their consent without rules which tell *how* the consent is to be expressed. Then we need a further rule for that purpose.

(from the runoff to a proportional system and from a proportional system back to the runoff etc.). After the War, there was one experiment with the plurality (demanded by the US Ambassador) and several experiments with different versions of proportional representation. According to one commentator "In the post-war period manipulation of the electoral system has been one of the principal means by which the Right has sought to contain the Left and to perpetuate its hold on power" (Clogg, 1984, 190). This practice has continued. In 1989 the Leftist PASOK government introduced a more proportional electoral law in order to minimize the expected victory of the Right. In 1990, the Rightist government curtailed the proportionality again. In the Polish 2001 elections, the opponents of the Social Democrats altered the electoral law in order to prevent a Social Democratic majority government, by replacing the d'Hondt system by a modified Sainte-Laguë and by increasing the district magnitude. Both changes favoured middle-sized parties. The emergence of a Social Democratic majority was prevented, but the main architects of the new system did not themselves profit from the change (Millard, 2003, 70–71).

Locke's problem re-emerges in the modern scientific studies on electoral rules. Take an article by Rahat and Sznajder (1998). On p. 430 the authors tell that the concept "electoral engineering" is used in two different ways. One deals with "the possibilities of designing an electoral system that will help to obtain *system-oriented goals*: better representative structure, governability, government and regime stability". The other meaning "relates to the manipulations of electoral laws that are made by interested players, such as parties and candidates, who aim to predispose election results". The first form of electoral engineering is the good, the second the bad one. How are the good and bad forms of electoral engineering to be distinguished from each other? When electoral engineering is exercised for "systemic" purposes, and when for partisan reasons only? The "system-oriented goals" seem simply to be the political scientists' new term for Locke's "public good". Who has the power to decide what "the system" requires? It is unlikely that system-oriented goals will be shared by literally *all* members of a system. Consider goals such as "governability" and "stability". One way to achieve these aims is to establish rules that are likely to create stable majorities and to punish extremist parties. But the rules may do this by cementing the power of the present rulers. The obvious purpose behind many unusual electoral devices such as the bonus rules in Mussolini's Italy and in some Latin American countries (Sect. 3.5.2), or the unit rule used in Tunisia and Singapore (Sect. 3.1.3), is to enforce the monopolies of the ruling parties. At the same time, these rules *may* also increase governability and stability. To take a further example, the Unionist ascendancy in Northern Ireland effectively disenfranchised the Catholics by gerrymandering and, admittedly, many of the disenfranchised Catholics supported the extremist Sinn Fein party. Nevertheless, the Unionist rule in Northern Ireland is the standard textbook example of a majority tyranny. But if it is unfair to exclude the extremists by using gerrymandering, is it, nevertheless, acceptable to exclude them, for example, by introducing an electoral threshold for that particular purpose? Both methods are likely to punish some *non-extremist* voters by leaving them without representation.

Moreover, if the distinction between legitimate and illegitimate electoral engineering is based solely on the *reasons* held by the "engineers", we are in troubles. It is not easy to identify the "real reason" behind any particular institutional arrangement. Political groups (or even individual politicians) do not usually make important decisions for one single reason.

3.1.7   Towards a Theory of Fair Voting Rules

What is needed is a general normative theory of elections and of voting which could provide impartial reasons to choose from among alternative institutional arrangements (How the politicians could be forced to take these reasons into account is another matter). Unfortunately, there is no general theory of fair voting rules. However, using the ideal of democracy sketched in Chap. 1 as the starting point, we may develop a *prima facie* plausible list of criteria for a reasonably good

electoral system. According to the view accepted here, democracy is basically a way to distribute power in a society; voting rules and electoral systems are an important—although not the only—institutional aspect of this power distribution. At least the following criteria are, therefore, plausible. (1) The most important and most widely accepted criteria are related to *equality*. For most democratic theories, it is axiomatic that voters should be treated in an equal way (cf. Sect. 1.3).[10] (2) Another criterion directly related to democratic values is *responsiveness*. Generally, democratic responsiveness may be defined as a necessary correspondence between people's values and governmental policies (Sect. 1.3). Powell (2004, 91) defines it as "what occurs when the democratic process induces the government to form and implement policies that the citizens want". More specifically, an electoral system should be responsive to the changes of opinion. (3) *Transparency* means that voters should generally be able to see how their choices are likely affect the outcomes, and able to see how a particular elections result is connected to policy choices. Transparency must not be equated with the *simplicity* of procedures. For example, proportional elections are not necessarily less transparent than single-member elections, although proportional election rules are usually quite complex. (4) An electoral system (or more generally, any system of decision-making) should be able to *solve value conflicts*: to produce unambiguous and binding (although reversible) decisions in all decision-situations.[11] A related requirement is that elected governments should be able to implement *internally consistent* policies. (5) Responsiveness and the ability to solve value conflicts are related to the *accountability* of representatives. In a representative democracy voters should be able to identify those who are responsible and reward or punish them according to their performance. (6) Finally, *wide legitimacy* is an important aspect of decision-making systems. It is, however, difficult to define in a precise way. At the minimum, decisions should provide most people affected by them some rational reasons to comply with the decisions and accept them as binding, at least provisionally. Legitimacy in this sense is a matter of degree; one aspect of it is that the system should encourage *reasonable compromises*, thus providing rational reasons for as many people as possible.[12]

These criteria may be seen as institutional concretizations of the general democratic principles introduced in Chap. 1. Nevertheless, they are still rather vague. In the special case of *two* alternatives (discussed in Sects. 2.2.1–2.2.4), May's conditions provided a relative precise interpretation of the criteria (1)–(4). Formulated in a more precise way, the criteria picked a single rule, the majority rule, as the best.

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[10] "In elections the vote of each member has about the same weight" (Dahl & Lindblom, 1953, 41).

[11] "Elections (. . .) must decide, in some basic way, the outcome of the competition for power and policies". (Harry Eckstein, cited after Barry, 1970, 54).

[12] According to Bellamy (1999, 132) "we need a voting system for both selecting representatives and making policies in the legislature that builds in compromise to majoritarian decision-making". Mackie (2006) uses the term *centrality*: "A democratic voting rule should select the central tendency among individuals' rankings" (p. 15).

However, it is not self-evident that there is a corresponding extension to more complex cases, or that all the criteria (1)–(6) are mutually compatible.

3.2   Criteria for Choice: Majority, Plurality, and Condorcet

Even if we see May's theorem as an argument for the uniquely fair nature of majority rule, the problem is that the theorem applies only when there are no more than two alternatives. The world does not usually provide us with two options only. First, many issues are matters of degree rather than choices for or against something, especially when some quantifiable phenomenon like money is involved. Second, issues tend to be complex. They usually contain several potentially relevant aspects and dimensions. There are two possible ways of adding complexity to the simple binary setting: we may increase the number of options, or consider the cases where several decisions on the acceptance or rejection of multiple interconnected alternatives are made simultaneously. Later we will see how deviations along each of these dimensions may lead to a breakdown of the attractive properties of majority voting highlighted by May's theorem.

3.2.1   The Absolute Majority Criterion

If there are more than two options, there are no guarantees that there exists an alternative considered as the best one by an absolute majority of voters. Then, the majority rule is no longer decisive. As we have seen in Sects. 3.1.1–3.1.4, there are numerous possible ways of "extending" majority rule to cover situations with more than two options. Majoritarian rules like the amendment rule solved the problem by reducing it to a series of choices, while positional and mixed rules like the Borda count, approval voting, and the Bucklin rule solved it by taking account of the positions various alternatives have in individual preference orderings. Among the latter, the plurality rule is in its own class: it takes only the first positions into account. All these rules can be evaluated in the light of different criteria; none of them is unambiguously superior.

The most obvious among the majoritarian criteria is the *absolute majority criterion*: in the multiple-alternative cases, it satisfies all May's conditions except decisiveness. When there are more than two alternatives, it is quite common that none of the alternatives is regarded as the best by more than a half of the voters. But *if* there happens to be such an alternative, the criterion says that it should be chosen. Thus, the criterion requires that if majority voting were to produce an unambiguous result, our decision rule should not diverge from it. Because democracy is so often associated with majority rule, it may come as a surprise that some proposed or actually used procedures do not satisfy this requirement. In addition to point-counting rules like the Borda count or the utilitarian rules, certain "plurality-like"

rules (some of which were widely used in the nineteenth century but are now less popular) violate the absolute-majority requirement when there are more than two alternatives. What these rules have in common is that voters can cast their votes for more than one candidate or alternative. These "additional" votes may, in some cases, help the victory of a candidate or alternative not considered the best by a majority.

It is interesting that rules which may fail to elect a candidate who gets over 50 % of the first preference votes are not widely in use in elections. Cumulative voting and multiple voting have lost their popularity in nation-wide elections. So has the indirect (two-stage) majority rule. The Borda count and approval voting are used mainly in private organizations; although since the medieval times they have always had their defenders, they have never become popular in general elections. The use of non-majority methods in private organizations may be related to the fact that such organizations have other criteria of internal decision-making than equality or responsiveness. They may, for example, try to ensure that various minorities are sufficiently represented (Hazan & Rahat, 2010, 85).

3.2.2   *Condorcet, Plurality, and Borda*

The rule used in many countries, especially in former British colonies, is the familiar plurality or relative majority rule: the alternative which has most supporters is the winner. Like most rules in actual use, it chooses an absolute majority winner, if there is one. Historically, the plurality and the plurality runoff rules are earlier inventions than modern party democracy. In the eighteenth and nineteenth century elections, the presence of only two candidates, or even an uncontested election, was the norm; hence, the winners were usually elected by absolute majorities, and the plurality criterion or a second ballot were needed only in exceptional cases.[13] It can be shown that the plurality rule is the only one which counts only the first preferences and satisfies anonymity, weak neutrality, weak monotonicity and decisiveness when there are more than two candidates. In this very restricted sense, May's Theorem *can* be extended.[14] As such, this is not a very

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[13] Outside the United States, the tendency in "majoritarian" systems has been clear. In the French parliamentary (runoff) elections in 1877, 98 % of the seats were filled in the first ballot by an absolute majority of the votes, and the average number of candidates was two; in 1978 the respective numbers were 13 % and 9. In the post-war Britain, nine MPs out of ten were elected by an absolute majority; now only a half of them, and in some elections only a third.

[14] See Goodin and List (2006). The authors actually argue that the plurality rule satisfies May's *strong* monotonicity (or positive responsiveness) condition. The problem with this claim is that, unlike May, Goodin and List seem to discuss *vote* aggregation rather than *preference* aggregation; otherwise their proof cannot be valid. In the context of two alternatives, the difference between these approaches is without consequence; if there are only two alternatives, voters are always able to express their full preference orderings. With more than two options, however, the plurality rule is not strongly monotonic if the arguments of the choice function are voters' preferences rather

impressive result. There is no obvious reason—apart from simplicity—why all information about the lower preferences should be ignored. If it is admitted, most rules in general use do satisfy the rest of the conditions.

The most problematic property of the plurality rule is that if there are more than two candidates, and no majority winner among them, it may select *an absolute majority loser*, that is, an alternative which is regarded as the *worst* one by more than a half of the voters. This is shown by the following example:

Example 3.2

5 voters	4 voters	3 voters
a	*c*	*b*
b	*b*	*c*
c	*a*	*a*

This example constitutes the so-called *Borda paradox*. Candidate *a* is the plurality winner, although she is considered the worst candidate by a majority.[15] Avoidance of the Borda paradox seems to be a natural consequence of the majority principle. Indeed, it has been one of the main motives behind the development of electoral rules.

In the example above, candidate *b* has an appealing property. Although she is not regarded as the best candidate by a majority, in a series of pairwise comparisons between candidates she is always supported by *some* majority against any competing alternative. In this set of the alternatives, she is *the Condorcet winner*. In one sense, the Condorcet-winner criterion is the weakest among the majoritarian criteria. If one candidate satisfies any of the stronger criteria—absolute majority, qualified majority, or unanimity—that candidate has to be a Condorcet winner, too. And, of course, a Condorcet-winner cannot be an absolute loser. In another sense, however, the Condorcet-winner criterion is a demanding one. In order to apply it, we need information about the entire preference profile of all voters. Hence, rules which necessarily choose an absolute-majority winner may still fail to choose a Condorcet winner if no absolute-majority winner exists. Indeed, *all* rules used in general elections (that is, all listed in Sects. 3.1.3 and 3.1.4) fail to satisfy the Condorcet-winner criterion in some cases.

According to the absolute-majority criterion, the winning candidate should be the most preferred one among more than half of the voters. If there is no such candidate, we may either drop the "more than half" requirement and be satisfied with mere plurality, or drop "the most-preferred" requirement and try to implement the Condorcet criterion. Or then, we may choose the alternative which is "on the

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than votes cast. This is shown by the following fact: if two or more alternatives tie, a change in the lower preferences of the voters is not sufficient for breaking the tie if, as with the plurality rule, they are able to express only their first preferences.

[15] In a plurality election with *k* candidates and *N* voters, the winner may be the *worst* choice for all but $(N/k) + 1$ voters. Thus, in a three-candidate election, he or she may be the worst choice for almost two-thirds of the voters.

average" considered as the best by applying the Borda criterion, that is, the alternative which collects the largest total of Borda points. The Condorcet, Borda and plurality criteria are the three most plausible interpretations of "the will of the people" or of John D. May's "necessary correspondence" (Sect. 1.3) when the number of alternatives or candidates is greater than two.[16] It may be argued that *all* the other electoral principles are either imperfect substitutes of, or compromises between, these three principles. Of the rules in general use, the plurality rule counts only first preferences, the runoff and alternative vote rules count some of the lower preferences, albeit in an unsystematic way, while the Condorcet and Borda rules take the voters' all preferences into account. Consequently, our choice between different rules is affected by our view of the importance of first preferences.[17] The Condorcet and Borda criteria rule out the Borda paradox, but may choose a candidate not regarded as the best or most suitable by any single voter. The Condorcet and plurality criteria imply the absolute majority criterion, while the Borda criterion may produce results which are incompatible with it.

For many theorists, the Condorcet-winner criterion is the supreme ethical requirement or even the only criterion compatible with democracy (for example: Ackerman, 1991, 277; Black, 1958, 72; Dahl, 1956, 43; Hoag & Hallett, 1926, 481; Radcliff, 1992, 519; Schulz, 1949, 215; Tännsjö, 1992, 28; Wade & Curry, 1970, 44–45; Weale, 1999, 146–147). Iain McLean presents the basic argument:

> Majority rule is necessary, though doubtless not sufficient, to any definition of democracy. What is majority rule? The rule that the vote of each voter counts for one and only one; and that the option which wins a majority is chosen and acted on. Indeed, the second requirement is little more than a special case of the first. For if an option which is not a majority winner is chosen, then the votes of those who supported it turn out to have counted for more than the votes of those who would have supported the majority winner. (McLean, 1991, 177; cf. McLean, 1989, 155)

Similarly, for Riker (1982, 100) the notion of a Condorcet winner is

> closely related to the notion of equality and "one man, one vote" in the sense that, when an alternative opposed by a majority wins, quite clearly the votes of some people are not being counted the same as other people's votes.

The supporters of the Condorcet criterion see it as a natural extension of majority rule. Indeed, Michael Dummett (1984)—who does not support the Condorcet criterion without reservation—thinks that anyone who sincerely adheres to the absolute-majority principle must also adhere to Condorcet's principle.

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[16] For example Budge (2000, 203–204). For utility maximization as the fourth possible criterion, see Sect. 3.3; for proportionality as the fifth (only partly competing) criterion, see Sect. 3.5.

[17] The first recorded disputes on the respective merits of the majority-principle and the Borda principle appeared in the sixteenth and seventeenth centuries when a Borda-type positional system was used in Belgium. The interpretation of electoral results caused some disagreement. Pope Gregory XV (Pope 1621–1623) decided that when "the number of votes" and "the number of voters" pointed to different directions, the latter was decisive (Moulin, 1958, 517).

Risse (2004) goes through most justifications of for the majority rule in dichot-
omous settings. The arguments discussed by Risse are the following: (1) May's
Theorem (see Sect. 2.2.2); (2) the argument that majority rule maximizes the
number of people who exercise self-determination (Sect. 6.1.2) or, alternatively,
maximizes the total utility when intensities are equal; (3) the idea that majority rule
expresses respect for people in the cases of disagreement, and (4) the so-called
Condorcet's Jury Theorem (Sect. 5.5.3).

However, none of the standard arguments for the majority principle in *dichot-
omous* cases can be extended to more complex cases. May's Theorem cannot be
generalized to multi-alternative situations. Again, the idea that majority rule max-
imizes the number of self-determining citizens (Dahl, 1989, 138–139; Graham,
1982; Kelsen, 1929, 1945) has a clear application in the two-alternative cases only.
The argument that the use of the majority principle expresses *respect* for the voters
is plausible. To take an ancient example, the candidate in the 1604 elections of the
English House of Commons who argued that his supporters, although in a minority,
were "of better sorte and qualytie" did not treat the supporters of the other
candidates respectfully. However, the majority principle expresses respect for the
very reason that it treats all voters in an equal way—in other words, because it
satisfies the demands of weak neutrality and anonymity. Rules that do violate May's
strong neutrality criterion (for example, plurality or plurality runoff) can still be
neutral and anonymous in this weaker sense. Therefore, they need not favour
minorities in the same sense as qualified majorities or unequal votes. Although
one may say that "a minority wins" when a Condorcet winner is not chosen, in the
sense that the winning alternative would have been rejected by *some* majority, this
does not mean—*pace* McLean—that the rule used in the selection of the winner is
therefore biased against any particular voters or alternatives. Hence, no particular
voter group can complain that it is treated in a disrespectful way. *Mutatis mutandis*,
the same is true about the other arguments. The so-called Condorcet's Jury Theo-
rem (4) is discussed in Sects. 5.5.3–5.5.5 of this work; again it gives no unique
prescription in cases with more than two options. Thus none of the arguments (1)–
(4) supports the Condorcet criterion against the Borda or plurality criteria.

There is, however, an argument for the use of the Condorcet criterion not directly
based on the extension of the normative force of the standard majority rule. It is
based on the notion of reasonable compromises (cf. Sect. 3.1.5 above). When there
are several, competing proposals, the Condorcet criterion is one possible interpre-
tation of compromise. If the competing alternatives can be ordered along a single
dimension (say, Left-Right), the Condorcet-winning alternative is *the voter median*
(Sect. 3.5.9). The winning alternative represents an acceptable compromise
between different opinions, although it need not be the most-preferred alternative
of any opinion group (Weale, 1999, 133–134). This is a good argument against the
plurality criterion but not necessarily against the Borda criterion, which selects the
mean rather than the median of opinions.

3.2.3   *Condorcet Against Plurality*

Unlike, perhaps, some other problems discussed in this work, the choice between the three criteria is directly relevant to democratic practice. Consider the presidential elections in Chile in 1970. The rule used was the plurality rule. More precisely, if there was no absolute majority winner, the Congress had to choose the winner, but it had always—1946, 1952, and 1958—respected the plurality criterion. Of the candidates running in 1970, the radical Socialist Salvador Allende obtained 36.3 % of the votes, while the independent Conservative Alessandri got 34.9 % and the Christian Democrat Tomic 27.8 %. Allende tried to implement his radical Socialist programme, but was ousted in a bloody military coup. The argument of Allende's opponents, including the army, was that his mandate was defective. Almost two-thirds of the Chileans had voted for a non-socialist candidate, thus Allende had no right to force them to accept his programme—indeed, his support was lower than in the 1964 elections which he lost. Essentially, this argument claims that he was not a Condorcet winner in the 1970 elections. But such a result was no novelty in Chile. For example, in the 1958 elections Alessandri was elected on 31.2 % of the votes, while Allende got 28.5 % and the Christian Democrat Eduardo Frei 20.5 %. One may argue that the Christian Democrat candidate was the likely Condorcet winner in both cases (Rasch, 1996, 201).[18]

The Chilean case may be compared with the first presidential elections of the newly independent Republic of Estonia in 1992 (Stolpe, 1997, 244–245). The candidates were Arnold Rüütel, who was one of the architects of independence but, as an ex-Communist and the former president of the Estonian Soviet Republic, was perceived as a representative of the old guard; the former Minister of Foreign Affairs, Lennart Meri; Rein Taagepera, the distinguished Estonian-American political scientist, and Lagle Parek, who represented the small National Independence Party. The results were as follows (numbers in percentages):

Rüütel	42.2
Meri	29.8
Taagepera	23.7
Parek	4.3

In Estonia, as in Chile, Parliament had the power to make the final choice. In contrast to the situation in Chile, however, there was no tradition in Estonia that the plurality winner should be chosen. So, Parliament nominated Meri, although he was not a plurality winner. The most plausible justification was that all the votes not cast for Rüütel were actually votes *against* him; hence Parliament actually implemented

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[18] Chakravarty and Hojman (1999) argue that actually there was no Condorcet winner in the 1970 Chilean elections. However, the opinion measurements cited by Valenzuela (1978, 42) indicate that Allende was an absolute loser in 1970: 56.6 % of the respondents rejected his candidacy, while a little more than 40 % opposed the candidacies of Tomic and Alessandri. See also Colomer (2001, 115); on the same problem in the other Latin American elections, see Colomer (2007).

the will of the people as expressed in the elections. Translated into the language of the social choice theory, this means that Rüütel was regarded as a probable Condorcet loser, and Meri as a Condorcet winner.

Unlike the simple plurality, the plurality runoff rule cannot choose an absolute loser. It also performs somewhat better in respect of the Condorcet criterion—this fact is actually behind the common observation that the plurality runoff favours moderate candidates (Sartori, 1997, 67). If the leader of the first ballot is defeated in the second, it at least proves that she was *not* a Condorcet winner.[19] Most notably, the runoff method invariable elects a Condorcet winner who is the first choice of more than *one third* of the voters. But when this condition is not satisfied, it does not ensure the election of Condorcet-winning candidates. In order to see this, let us look again at Example 3.2. There, alternative b is the Condorcet winner. The plurality rule selects candidate a with four votes, while the plurality runoff first eliminates b and then makes a the winner in the second ballot. In a case like our example—one office to be filled and only three candidates—the alternative vote (AV) works in a similar way. It eliminates b, who has the smallest number of first-preference votes; the second votes of its supporters are transferred to c, who becomes the winner.

Again, this defect of elimination rules like runoff or AV has direct political consequences. Suppose that the political Centre is the largest group, but internally divided between several candidates, one of whom is the Condorcet winner. The extremist parties on the Right and on the Left are able to concentrate their votes on their own candidates. Then, the two extremists may enter the last ballot, and the Centrist majority is forced to choose between them. Something like this might have happened in the presidential elections in Cyprus in 1988 (Dimitras, 1988; Stolpe, 1997, 176–177). Of course, we have no knowledge of the preferences of the voters not expressed in the ballots, but because the behaviour of the electors in Cyprus is extraordinarily stable, some inferences can be made. In the 1983 elections, the candidates were Glafkos Clerides, a right-winger; Spyros Kyprianou, the incumbent President who was supported by his own centrist Democratic party as well as by the Communists (AKEL), and Vassos Lyssariades, a Socialist. Kyprianou was elected in the first ballot. In the 1988 elections, AKEL introduced its own candidate, George Vassiliou. This time, the winner was Vassiliou in the second ballot. The votes in these two elections were distributed in the following way (numbers in percentages):

	1983	1988	
		First	Second
Clerides	33.9	33.4	48.4
Kyprianou	56.6	27.3	–

(continued)

[19] According to Key (1950) 36 % of the runoff contests in the (US) Southern primaries went to the second-place candidate. Glaser (2006) finds that 28 % of the 117 Southern Congressional primaries that went to a runoff between 1980 and 2002 were won by the candidate who placed second in the first contest. In those cases the first-ballot plurality winner was not a Condorcet winner.

	1983	1988	
		First	Second
Lyssariades	9.5	9.5	–
Vassiliou	–	30.1	51.6

Thus, Clerides and Lyssariades got almost exactly the same proportion of votes in both elections. What made the difference was that in 1988 Kyprianou failed to enter the second round because he had to share his votes with a new candidate, Vassiliou. It could be argued that the Centrist Kyprianou was a Condorcet winner in 1988, as he undeniably was in 1983.

An even more dramatic—and more disturbing—example of the erratic behaviour of the runoff—rule may be the French presidential election in 2002. In the first ballot, President Jacques Chirac received a lower proportion of votes than any incumbent president in the history of the Fifth Republic. But because the Leftist votes were spread among several candidates, Chirac's challenger in the second round was not the popular Socialist Prime Minister Lionel Jospin, but the extreme Rightist Jean-Marie Le Pen. As a consequence, M. Chirac won the second ballot with a massive 82 % majority.[20] However, in spite of these anomalies, the strong (top-two) runoff is more Condorcet-efficient than the plurality rule. This can by shown by a simple argument: the plurality rule elects a Condorcet-winning candidate if and only if she receives more votes than any other candidate. The runoff-procedure elects a Condorcet-winner if and only if he or she is one of those *two* who receive more votes than the rest of the candidates. Hence, whenever the plurality rule elects a Condorcet-winner, he or she is also elected in a (strong) runoff-election, but not vice versa.

What about the *weak* versions of the runoff-procedure, used in many parliamentary elections (Sect. 3.1.3)? Because they seem to lie "between" the simple plurality-rule and the strong runoff, one might that think that whenever these two procedures agree, a weak (say, top-three) runoff *must* also agree with them. However, this is not the case, as is shown by the following example:

Example 3.3

39 voters	30 voters	20 voters	6 voters	5 voters
a	c	b	d	e
b	a	a	c	c
d	b	d	a	a
e	e	e	e	b
c	e	c	b	d

---

[20] Of course, this result does *not* show that Chirac was not a Condorcet-winner; he might have defeated Jospin too, although not with such a margin. Abramson (2007) has provided some evidence that in the 2007 French elections, the Condorcet-winner was not the runoff-winner Nicolas Sarkozy but François Bayrou who came in as the third in the first round.

Here we have a simple example of how the social choice analysis may some-times increase our understanding of the mechanics of decision-procedures. In the example, candidate a, the Condorcet-winner, is elected both by plurality and by the strong runoff. Indeed, a is elected by any reasonable procedure—*except* by a weak runoff. Consider a version which allows all the candidates who pass the 12.5 % threshold to run in the second round (as in the French parliamentary elections), and the final choice is made by plurality. In the first round, only the candidates d and e are eliminated. In the next round, their supporters transfer their votes to c, who is elected—unless the others are able to agree on a common candidate.

Several authors, for example Merrill (1984), have tried to use simulation experiments in assessing how often different voting rules may violate the Condorcet criterion. Such experiments cannot really predict how likely such violations are, but at least they may tell something about the relative differences. It seems that there are marked differences between the rules and that their performance is heavily dependent on the number of candidates. With three candidates, the differences are not dramatic: the plurality runoff, the alternative vote and the Borda count select Condorcet winners in over 90 % of cases, plurality rule in approximately 84 % of cases, and approval voting slightly less often. With seven candidates, the plurality rule falls to 61 % and the plurality-runoff to 71.8 %; for the Borda count and the alternative vote the percentages are still over 80. This confirms the assumption that the plurality rule is a particularly inefficient way of selecting Condorcet winners.[21] Merrill's simulations are based on the supposition that all preference configurations are equally likely. This is rather unrealistic, but simulations based on different suppositions do not change the general picture (McGann, Koetzle, & Grofman, 2002). The Condorcet-efficiency of a rule is essentially dependent on its ability to take the lower-preference information into account. More generally, we may notice that when one alternative has to be selected, (a) unlike the Borda count and the approval vote, the alternative vote, the plurality and the plurality-runoff rules never violate the absolute-majority criterion, but (b) they are definitely less efficient in selecting Condorcet winners, and (c) the plurality rule and the approval voting may even select a candidate regarded as the worst candidate by an absolute majority. However, (d) when more than one candidate is elected, an absolute majority loser can be among them even when the Borda count, the alternative vote or the plurality runoff are used (Felsenthal & Maoz, 1992, 122).

We have seen that the most common electoral rules are not very effective in selecting Condorcet-winners. Indeed, Joseph A. Schlesinger has argued that

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[21] The empirical work of Felsenthal and Machover (1995) is compatible with these results. Colomer (2007) estimates that in the Latin American presidential elections the Condorcet-winning candidates have won the presidency in about two-thirds of plurality elections and three-fourths of runoff-elections. The effective numbers of candidates in these elections have been 3–5; hence Colomer's estimations are roughly compatible with Merrill's simulations. Fishburn and Gehrlein (1982) have shown that (i) the top-two runoff-rule elects Condorcet—winners more often than the weaker runoff-rules, and that (ii) the standard Borda rule is, in Condorcetian terms, better than any of its modifications.

because the Condorcet-criterion is never implemented in general elections, "there is something wrong with the idea" (Abramson, 2007, 291). However, the rules used in legislative decision-making (Sect. 3.1.2) usually *do* satisfy the Condorcet-winner criterion. Most notably, the greatest sinner, the plurality rule, is almost never used in legislative decision-making. Does this indicate that the need to respect the will of the majority is seen as more important in making legislative decisions than in electing representatives or in referenda? If so, why? Of course, in order to select a Condorcet winner we have to find out who it is—and the methods needed to count Condorcet winners are usually more complex and time-consuming than those used in most direct elections and in referenda. However, in the age of computers, this should not be an insurmountable obstacle. One possible reason for the difference is that parliamentary-voting methods are non-neutral; in certain situations they favour a specific alternative (Sect. 3.2.6). In electoral contexts, this is usually seen as intolerable.

3.2.4   Applying the Social Choice Analysis: Plurality Rule and SV

In countries using the plurality rule, electoral reform is often a hotly disputed issue. As we have seen, there are several problems related to the rule. First, the presence of a serious third candidate in most constituencies may result in the victory of an absolute loser at the constituency level. Generally, the results of plurality elections are especially problematic when the winner receives considerably less than 50 % of votes, the difference between the winner and the runner-up candidate is a small one, and/or the winner is not a centrist candidate. In such a case, the winner is not likely to be a Condorcet-winner and may well be an absolute loser.[22] Second, the rule may produce grossly oversized parliamentary majorities based on narrow pluralities at the national level. In the worst case, such an artificial majority may be so large that it has the power to change the constitution. Third, the rule may even produce

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[22] Narrow pluralities and/or close results have often motivated the change to runoff-elections. Examples of such changes are the adoption of the presidential election-rules in Chile (the 1989 constitution), Dominican Republic (1994) and Uruguay (1997) as well as in the Democratic primary elections in Arkansas (1937) and New York (1972). Shugart and Taagepera (1994) and O'Neill (2007) have argued that while a runoff makes it more likely that a Condorcet-winner is chosen, it introduces unnecessary costs when the plurality winner also happens to be the Condorcet-winner. If the winner's share of votes in the first ballot is close to 50 % and if the margin between her and the runner-up candidate is wide, it is probable that she would also win the runoff. This justifies the use of *qualified* pluralities (see Sect. 3.1.3). Another possible (utilitarian) justification for qualified plurality runoffs—not discussed by O'Neill—is that a candidate with relatively wide (say, 45 %) first-preference support might be a better choice than a Condorcet-winner with a wider but lukewarm low-preference support.

parliamentary majorities without a nationwide plurality.[23] The problem with the plurality and runoff-elections is that even when all representatives are elected by absolute majorities in their respective constituencies, the resulting majorities in the representative bodies are only majorities of majorities, as J. S. Mill observed (Sect. 2.2.3). Fourth, these properties of the plurality rule tend to invite strategic voting and gerrymandering.[24] These problems may be formulated in terms of responsiveness, transparency, and voter equality. Indeed, most of the electoral rules described in Chap. 3 were originally introduced as means to correct these defects of the simple plurality or of the other "plurality-like" rules.

Are the results produced by the theorists of social choice useful for the practical discussion on voting rules? Some authors think that social choice considerations should be decisive; others (for example Nurmi, 1987) take a more cautious attitude. Let us take an example. The Plant Committee, set up by the British Labour Party, recommended (in its second report in 1993) an electoral rule called the *supplementary vote* (SV). The rule works in the following way: in single-member constituencies, voters mark their ballots with their first and second preferences. If there is no first preference absolute winner, all candidates except the two with largest first preference pluralities are eliminated, and the second preference votes of those voters who voted for the eliminated candidates are added to the votes of the top two. The candidate with the largest total of votes wins. The supplementary vote has been used in mayoral elections in the UK and in Norway.

In terms of the theory of social choice, the supplementary vote seems to combine the vices of the better-known voting rules without possessing any new virtues. First, with three candidates, it works exactly like the alternative vote (AV). Therefore, the supplementary vote, like AV, has to be non-monotonic. Second, with four or more candidates, the supplementary vote behaves unlike the alternative vote, for it may also elect an absolute loser. In this sense it *does* behave like the plurality rule. This is easy to prove: if all those voters who support one of the eliminated candidates also mark another eliminated candidate as their second best, their second votes are not counted at all, and the candidate with the largest first-preference plurality is elected. As we saw, that candidate may well be an absolute loser. This can be seen in the following example:

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[23] In an empirical study on the phenomenon Richard S. Katz (2001, 144–145) concludes that the probability of "spurious" majorities in plurality elections is 5–10 %. According to Colomer (2001, 102–103) it has happened ten times in the nation-wide elections in the USA, three times in Canada, four times in New Zealand and six times in the UK. In the US-American and Canadian state/provincial elections it has been a more common phenomenon. Katz (2001, 144–145) finds as many as 41 cases in the elections of the lower houses in the US states between 1968 and 1994, and 11 cases in the Canadian provincial elections since 1949. Siaroff (2003) shows how the phenomenon has also been relatively common in the Australian AV-elections.

[24] In a two-party contest with single-member constituencies of equal size, a party may gain a parliamentary majority with 25 % of the votes. With SNTV in two-member constituencies, the theoretical minimum is 33.3 %. The effectiveness of gerrymandering decreases when the number of representatives elected from constituencies increases: if M is the number of seats in a constituency, the minimum proportion of votes needed to secure a majority in a majority of constituencies of equal size is $(M/M + 1)/2$. When M increases, this approaches to one half of the votes.

Example 3.4

30 voters	31 voters	20 voters	19 voters
a	*b*	*c*	*d*
c	*a*	*d*	*c*
d	*d*	*a*	*a*
b	*c*	*b*	*b*

In this example, all votes given to candidates *c* and *d* are "wasted", and candidate *b*—the absolute loser—becomes the winner by virtue of the largest plurality (As we see, SV, AV, and contingent vote rules are not equivalent: AV elects *c*, while contingent vote elects *a*). There is nothing artificial in the example: if we look at the British mayoral elections in 2000 and 2002, the number of votes "wasted" in this way was considerable. The amount of "wasted" votes in those towns where second preferences had to be counted was between 15.5 % (Watford) and 42.9 % (Stoke-on-Trent) (counted from the data provided by Rallings, Trasher, & Cowling, 2002). This does not show that the elected candidates were not Condorcet winners. However, it shows that the supplementary vote does actually "waste" votes—and also a lot of information about voters' preferences.[25]

Third, because the supplementary vote is a "top-two" rule like the plurality runoff, it may elect the Condorcet-winning candidate if she is one of the two candidates with the largest pluralities. In this sense it works better than the ordinary plurality rule. But it can never do better than the plurality runoff, for unlike the latter, it does not *ensure* the election of a Condorcet candidate even when he or she is among the top two. Unlike the plurality runoff and the alternative vote, the supplementary vote does not count those lower-than-the-second preferences which may be decisive in determining the Condorcet winner when there are more than three candidates running. The supplementary rule may even fail to elect a Condorcet winner when *all* the other rules discussed here would elect such a candidate. This possibility is shown by our next example:

Example 3.5

31 voters	30 voters	19 voters	20 voters
a	*b*	*c*	*d*
d	*a*	*b*	*c*
c	*c*	*a*	*a*
b	*d*	*d*	*b*

---

[25] The limited version of AV which allows only the expression of first and second preferences (see Lusch, 1907) suffers from the same problem. However, because it eliminates candidates one-by-one, it works like the supplementary vote in the Example 3.5 but *not* in Example 3.4. Of course, the notion of "wasted vote" is a tricky one. Ultimately, I think, the notion has to be based on a moral argument. A supporter of Al Gore in Florida 2000 might have criticized someone who was going to vote for Ralph Nader: "If everyone like you will act in that way, George W. Bush wins, and your votes are just wasted". If, however, the supporter of Nader would have replied: "Bush or Gore, I don't care; I just want to express my true opinion", there is no further reason to call her vote "wasted".

Under the supplementary vote, candidates c and d are eliminated. In effect, the votes of the 20 right-most voters are ignored, while the votes of the 19 voters are transferred to b, who wins the election with these additional votes. The plurality, plurality-runoff (strong and weak), Borda, alternative vote, contingent vote, Coombs, and the Bucklin rule all elect a, who is also the Condorcet winner.

Merrill's (1984) simulation studies mentioned above give us some information about the Condorcet efficiency of various rules. In Condorcetian terms, the ordering of the rules, from the most efficient to the least efficient, seems to be roughly the following: (1) Borda, (2) alternative vote, (3) strong runoff, (4) approval, and (5) plurality. Unsurprisingly, the position of a rule in this ordering correlates with the amount of the preference-information the rule in question is capable of utilizing. The Borda method takes the entire preference orderings into account; the alternative vote and the runoff methods use some information about the lower preferences, while the plurality rule counts the first preferences only. I have made no simulation experiments. My guess is, however, that when there are more than three candidates and the voters are willing to submit their entire preference orderings, the Bucklin rule performs better than the standard top-two runoff—and also better than any of its weaker versions—while the performance of the supplementary rule is markedly lower than that of the runoff-rules. No theoretical argument seems to support the introduction of the supplementary vote. In terms of the social choice theory, it is surely one of the most defective rules ever used in general elections. This, however, shows the difference between the perspective of the social choice theorist and that of a practical political reformist. For the supplementary-vote system is clearly a product of British circumstances. We can see this by examining how the plurality rule used in the British elections actually works.

One problem with Merrill's experiments on the Condorcet efficacy of various rules is that in the real world the number of candidates is not independent of the electoral rule. The reason why the plurality rule is often seen as unproblematic is the well-known fact that when applied in elections with single-member constituencies it (*ceteris paribus*) produces only two viable nation-wide parties. This regularity—the so-called Duverger's Law—is essentially related to the strategic properties of the rule. To put it simply, the voters do not want to "waste their votes" by casting them for candidates who are expected to have little chances of being elected. They tend to concentrate their votes on "realistic" candidates who may well be only the second- or third-best alternatives in their preferences (Cox, 1997). This regularity, when it is common knowledge, is also likely to affect those who finance the electoral campaigns, the political activists, the media which focuses on the "real" contenders, and ultimately the preferences of the voters. In this way, Duverger's Law may have a further self-fulfilling effect. The same tendency seems to work when only a single office (for example, the presidency) is filled: the plurality rule seems to reduce the number of "serious" candidates more effectively than, for example, the runoff-rule (Jones, 1995, Chapter 6; Wright & Riker, 1989). In these conditions, politics is generally seen in terms of binary choices, and the plurality rule usually works like the simple majority rule. Thus, Colman and Poutney (1978) estimated that in the 1966 British General Elections, only 15 constituencies out of

261 failed to elect a Condorcet winner. On the basis of Merrill's simulations, one would expect more failures (However, the situation in the British elections may be different now).

Most arguments given for the plurality rule are based on its empirical tendency to produce a two-party system rather than on its logical properties. For example, it has been argued that the plurality system provides a clear choice for voters, that it makes representatives directly responsible to their constituents, and that it tends to produce stable governments. All these desirable properties are actually properties of a *two-party system* rather than of the plurality rule itself. When more than two serious candidates are the norm, as in the case of Chile, plurality loses most of its appeal.

According to Elaine Spitz, the fact that a result is approved by a minority of voters need not weaken its legitimacy, for

> all rational decisions require reduction of alternatives from many to a final choice. Everyone in society knows this. If they decide to stop reducing alternatives before they get down to a final choice between two, it can only mean that, for some reason, they value a final choice among three (or more) more than they value the achievement of a majority mandate. By their actions, by their refusal to pare down the list of candidates to two, they announce their willingness to accept or to risk the acceptance of a plurality winner, knowing that they could have avoided the plurality situation if they have chosen to. (Spitz, 1984, 21)

The problem in this argument is that it overlooks the *problems of coordination* in a mass democracy. Spitz's implicit starting point is that normally there are only two salient candidates—say, a Democrat and a Republican—but in some exceptional situations a substantial number of voters may decide to cast their votes for a third candidate—say, for Ross Perot. But if there are normally more than two candidates appearing as salient, voters in a mass democracy have no way to reach an agreement on reducing the number of candidates to two.[26] Every voter is responsible for the way he or she casts the vote, and the majority of the voters may be held responsible for electing a bad candidate. But no one is responsible for the *overall distribution* of votes—the voters and voter groups vote for a candidate, not for a distribution. If the Labour party wins a majority in the British elections, it may be meaningful to say that "the people wanted a Labour government", for obviously getting a Labour government was at least one reason why many people voted Labour. Its victory may be seen as an intended result of a collective action performed by those who voted for it. But suppose that no party wins a majority. To say that "the people wanted to

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[26] Consider a case which blatantly violates Duverger's Law. Papua-New Guinea applies the plurality rule in single-member constituencies. In the elections of 1992 there were 1654 candidates competing in 109 constituencies; the average number of candidates per constituency was 15.2. The result was that in eight constituencies, the winners got less than 10 % of the votes of their electorates; in 40 they got 10–20 %, and only in 28 out of 109 did the winners receive more than 30 % of the votes (Reilly, 1997b). This is not a surprising result in a country with about 1000 different linguistic and ethnic groups. How would the standard justifications of the plurality rule work in these conditions? Certainly, we cannot say that it at least approximates to the beneficial properties of majority rule.

have a hung Parliament" is problematic, for there might not be a single individual in the electorate who wanted, or even expected, that particular result. It was not an intended result of a collective action, but an unintended result of several independent collective actions. No voter group "chose" to produce it. Every voter simply voted for her preferred party, hoping that it would gain a majority. As Lakeman and Lambert (1964, 52) remark, there have been several attempts in the UK electoral history to establish a coordinated strategy among the parties in the opposition, but the parties have not been willing to forego their rights to champion their own views and candidates in elections.

In a context where cases like those depicted in Examples 3.4 and 3.5 may look untypical, the supplementary rule may well appear as justified. The paradigmatic problem discussed by the British electoral reformers is a situation in which there is a third party that receives a considerable number of votes but very few seats. With three candidates only, the supplementary vote, unlike the plurality rule, cannot choose an absolute loser. Thus, in the present British conditions, the supplementary vote might provide an ad hoc remedy to coordination problems. For example, voters whose main motive is to prevent the election of a Labour candidate need not to choose between a Conservative and a Liberal; they can vote both. However, as compared with contingent vote or alternative vote, the supplementary vote does not seem to provide any specific benefits. With three candidates, all the rules are equivalent; with four or more candidates, the supplementary vote behaves more erratically than other preference-counting rules. Moreover, our examples show how the supplementary vote may well create coordination problems of a different type.

While the social choice theory is insensitive to particular circumstances, it can remind us of the logical possibilities that may be realized when the circumstances change. It cannot prescribe the ends. It *may* be able to tell something about the means of achieving the ends, but only when combined with and balanced against various empirical arguments.

3.2.5   The Central Weakness: The Condorcet Paradox

The most unproblematic, although not uncontested, interpretation of the notion of the "will of the people" is that an alternative supported by an absolute majority is selected. However, if there is no absolute majority behind any alternative, the Condorcet criterion seems to be an appealing substitute. But the problem does not end here. The earliest, and heuristically most important, "paradox" recognized by the theory of social choice is this: *it is not necessarily true that any of the alternatives can beat all its competitors in pairwise majority voting, that is, that there is any Condorcet winner*. In other words, the Condorcet criterion is not decisive. This is the famous *Condorcet Paradox* or the paradox of majority cycles.

To take the simplest case, suppose that the alternatives voted on in a three-person committee are (*a*) establishing a nuclear-power plant (*b*), establishing a coal plant, and (*c*) implementing an energy-saving programme. The preferences are as follows:

Example 3.6

1 voter	1 voter	1 voter
a	*b*	*c*
b	*c*	*a*
c	*a*	*b*

In a pairwise contest alternative *a* beats alternative *b* by two votes to one. Similarly, *c* beats *a* and *b* beats *c*. There is no Condorcet winner. Thus, if the committee takes a vote between all pairs, it reaches no solution—unlike the plurality or Borda rules—the Condorcet rule is not *decisive* in May's sense. If the committee does not take a vote between all the pairs, and if all the members vote according to their preferences, the voting order or "path" determines the solution. The order {*a,b*}, {*a,c*} makes *c* the winner, {*c,a*}, {*c,b*} results in *b*'s victory, and {*b,c*}, {*b,a*} picks *a*. The outcome is said to be *path-dependent* (see Sect. 4.2.7).

How serious is the problem? This question contains two different issues. First, how *likely* is it that a paradoxical distribution of preferences emerges in actual decision-making? This is partly an empirical question and will be discussed later. Second, in order to avoid a deadlock, what must be sacrificed? When deliberating on practical issues, we are bound to make *some* decision; we cannot live with a deadlock forever. In purely epistemic issues, there is always the possibility of leaving the question open. If a group of scientists cannot agree as to whether a purely theoretical proposition is true or not, they may simply conclude that there are insufficient grounds to believe either. But a law either becomes or does not become valid, the verdict of a jury must be "guilty" or "not guilty", and even if our committee remains in the state of indecision, the issue will be settled in one way or another in the real world out there. If the decision-makers cannot reach a decision upon an issue that belongs to their jurisdiction, they are morally responsible for that, too. As Dahl and Lindblom (1953, 338) remarked, government inaction is as much a political choice as government action. In our example inaction is a fourth option, presumably regarded as the worst by all the committee members.

Cyclical situations do not always exhibit the nice symmetry of our committee example. Consider the following case:

Example 3.7

50 voters	2 voters	49 voters
a	*b*	*c*
b	*c*	*a*
c	*a*	*b*

Here, again, we have an instance of the Condorcet paradox. But we cannot simply say that it does not matter which one of the three options is selected. If the situation is not a symmetrical one, it could be argued that the asymmetries should be utilized when determining the winner. Most solutions proposed by the social choice theorists would solve the problem in this way. For example, Condorcet himself recommended that the "relative strengths" of the majorities should be used to solve

the problem. In Example 3.7, 99 voters share the opinion that a is better than b, 52 voters think that b is better than c, but only 51 voters prefer c to a. We get the preference ordering $a > b > c$. Duncan Black's proposal is that if there is no Condorcet winner, the Borda winner should be chosen. In the example, the voters give two points for their favourite, and one point for the next best, so the Borda scores are 149 points for a, 100 points for c and 54 points for b. The resulting ordering is the same as the plurality ranking: $a > c > b$.

One important aspect of the cyclical configurations is that they are closely related to the other majority paradoxes . For example, it can be shown that in the case of a so-called Ostrogorski-paradox (see Sect. 6.2.1) the preferences of the voters over the possible platforms are always cyclical—in other words, a Condorcet paradox appears (Lagerspetz, 1996). To put it in more general terms, *all* aggregation paradoxes—in voting contexts and elsewhere—may be seen as instances of a single problem Saari (2001b).

3.2.6 Condorcet Paradox and Parliamentary Rules

The practices normally used in actual decision-making are far less complex than those proposed by the two French noblemen. We have already (Sect. 2.2.2) seen that some theorists of democracy are quite willing to give up May's neutrality requirement. The parliamentary amendment-procedure (Sect. 3.1.2) violates this requirement: in that it always puts the *status quo* alternative in the last round against the winner of the earlier rounds. The outcome becomes dependent on a "path", i.e. on the voting order: if there is a cycle and the *status quo* alternative belongs to it, it becomes the result. Consider again Example 4.1 above. Suppose that we use the amendment procedure, and that c is the *status quo*. It will automatically enter the last round against the winner of the first round arranged between a and b. If all voters vote according to their true preferences, the alternative a will enter to the second ballot, in which it is defeated by c. More generally, a decision-problem may be analysed as a combination of two problems: (1) "Is the *status quo* to be maintained or not?" and (2) "If the *status quo* is to be replaced, what would be the best alternative?" In parliamentary contexts, the order of the questions is usually (2)–(1),[27] but some referendum rules, the parliamentary interpellation-process, and a recall followed by possible new elections proceed in the reverse order. Most rules favour the alternative which is taken up in the last ballot because it cannot be played out at an earlier stage and if there is a cycle (and voting is sincere), it becomes the outcome.

The versions of the amendment rule or the successive rule used in many European parliaments require the first vote to be taken between "the most extreme"

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[27] Rasch (1995, 2000) compares the procedures used in the European parliaments; Schwartz (2008) expresses some doubts concerning the reliability of Rasch's comparisons.

alternatives. Hence, they presuppose that the alternatives can be ordered along a dimension. These versions do not favour the *status quo* as such, but they favour centrist alternatives. There is, however, an additional problem involved. If judgments on the location of and distances between the alternatives are based on *voters' own perceptions*, rules may also violate the weak monotonicity requirement. This can be seen from the following example (which is also an instance of Condorcet's voting paradox):

Example 3.8

37 voters	27 voters	36 voters
a	*b*	*c*
b	*c*	*a*
c	*a*	*b*

In voters' perceptions, alternatives *c* and *a* are "most far away" from each other, for only 63 voters sees them adjacent (that is. in their perceptions the third alternative does not lie between them), while the corresponding numbers are 74 voters for *a* and *b*, and 73 voters for *b* and *c*. The first vote is, then, to be taken between "the most extreme" alternatives *c* and *a*. Alternative *c* wins first, and then loses for *b*. Suppose now that the support of alternative *b* increases significantly, as below:

30 voters	34 voters	36 voters
a	*b*	*c*
b	*c*	*a*
c	*a*	*b*

After the change of opinions, *b* and *c* are now "most far away" from each other—64 voters sees them adjacent, while the numbers for *a* and *c*, and for *a* and *b*, are 70 and 66, respectively. Therefore, the first vote is taken between *b* and *c*, alternative *b* wins, and then loses for *a*. Contrary to the monotonicity requirement (treated in Sects. 2.2.1 and 2.2.2 and again, in Sect. 3.5.5), *b* loses because of the *increased* support.

Most European legislatures use the *successive* rather than the amendment procedure. As under the amendment procedure, alternatives are arranged in a pre-determined voting order. Then, they are voted on one-by-one. If an alternative is accepted by a majority, no more votes are taken; if an alternative is not accepted, it is removed and the assembly moves on to the next alternative on the list. If no alternative carries a majority, the *status quo* is retained. This procedure seems to be especially sensitive to voting-order effects, and unlike the amendment method, it may reject a Condorcet winner even when voting is non-strategic. Aanund Hylland (2006, 144–150, see also Sager, 1998, 123–127)[28] discusses a case in the Norwegian *Storting* in which there was no Condorcet winner. The issue, decided in

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[28] Sager's (1998) account is earlier but less detailed; here I follow Hylland's narrative.

Storting on 8th October 1992 was the location of a new airport. The alternatives were constructing an airport at Gardermoen (*g*), a closer analysis of the possibility of building it at Hobøl (*h*), and a split solution with the domestic flights remaining at the current main airport and the international flights using Gardermoen (*d*). The preferences of the party groups were, according to Hylland, as follows:

Example 3.9

63 voters	37 voters	42 voters	22 voters	1 voter
g	*h*	*d*	*h*	*g*
d	*g*	*h*	*d*	*h*
h	*d*	*g*	*g*	*d*

There was a cycle: alternative *d* beats alternative *h* by 105 votes to 60, *h* beats *g* by 101–64, and *g* also beats *d* by 101–64. Because the margins are relatively wide, the cycle would be there even if some members were unwilling to vote according to the party lines. The Speaker of the *Storting* proposed the voting order (*d, h, g*). However, the majority in the *Storting* chose the voting order (*g, d, h*). Because everyone agreed that some decision had to be made, the first ballot was, in effect, between *g* and {*d, h*}. In this sequence, *d* was likely to emerge as the final winner. The 37 supporters of the alternative *h* (the representatives of the Conservative party) anticipated this outcome, and voted for *g* in the first ballot. Thus, no further votes were needed. The alternative sequence, proposed by the Speaker, would have produced *h* as a "straight" winner. Therefore, the 63 supporters of the *g*-alternative (the Labour party) would probably have voted *d* in the first ballot. This shows the practical relevance of the paradox: when majority preferences are cyclical, the outcome is determined by the voting order and by voting strategies. It also shows that such situations are seen as disturbing; as late as in 2000, the *Storting* appointed an independent commission to investigate the alleged irregularities of the decision-process.

3.3   Further Criteria for Choice: Borda and Beyond

All voting rules discussed above were based on *ordinal* comparisons of voters' preferences. Voters were asked to tell whether they prefer *a* to *b* or vice versa. If we could compare different decision alternatives in terms of the *intensity* by which they were supported or opposed, our decisions would not need to be based solely on the information of how high they figure in the rankings of individuals.

3.3.1   Beyond Ordinal Comparisons: Arguments for and Against

There are at least three possible reasons to see intensity comparisons as relevant. First, their relevancy follows from the general utilitarian programme. Second, most notions of fair distribution presuppose some forms of interpersonal comparisons at some level. In democratic theory, the much-discussed problem of "intense minorities" is usually seen as a problem of fairness, not of maximization (for overviews of the problem, see Anckar, 1996; Buchanan & Tullock, 1962, 132; Clark, 1998; Dahl, 1956, 48–50, 90–102; Jones, 1988; Karvonen, 2004; Kendall & Carey, 1968; Offe, 1985, 167–168). The classical formulation of the problem comes from Dahl (1956, 90): "What if the minority prefers its alternative much more passionately than the majority prefers the contrary alternative? Does the majority principle still make sense?"

   Third, it is often argued that intensity comparisons open an escape-route from Kenneth Arrow's impossibility result (Sect. 4.1.1). One possible way of interpreting Arrow's result is that an interest-based political theory such as utilitarianism cannot be based on ordinal comparisons only (Christiano, 1996, 96). In order to define the common good or general interest, we need some additional information. Either we have to reject the whole idea that decisions should be based on individual preferences, or we have to endorse full-blown utilitarianism with an interpersonally applicable measure of intensities (Lewin, 1988, 36–37). We should be able to say, in a truly utilitarian fashion, that an alternative is so many units better than another alternative when measured on some absolute scale. The question is *how* to get reliable information about these differences. We could, of course, "compare intensities" of preferences by simply asking: "How intensively do you prefer *a* to *b* (or *b* to *a*)? Three times more, four times more? Give a number." No proof is needed to show that our results would totally depend on the strategies chosen by those to whom we address the question. "If I say I want to go to the football a million times more than I want to go to the art gallery, you can retort that you want to go to the art gallery a million million times more than you want to go to the football game" (McLean, 1987, 189). What is needed is a *common* scale of measurement for individual utilities. We cannot escape Arrow's Impossibility Result by using a cardinal but not interpersonally comparable notion of utility, for an analogous result can be proved even in this case (Craven, 1992, 138).[29]

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[29] Thus the common references to "cardinalization" of preferences as a solution to the Arrovian problem are mistaken; the issue is interpersonal comparability, not the applicability of a particular measure function. An example of this mistake is Hoevenkamp (1990) in which the whole Arrowian problem is reduced to the problem of "cardinalization". Sen (1982, Part III) makes the issue clear. For example, the Rawlsian difference principle requires *interpersonal* comparisons—otherwise we could not identify the least advantaged group—but not *cardinal* comparisons. Boadway and Bruce (1991, ch. 5) give an excellent summary of various informational requirements in the context of welfare economics.

Conversely, it is possible to distinguish at least three reasons for *rejecting* interpersonal intensity comparisons in voting contexts. First, some theorists—following the famous critique made by the economist Lionel Robbins in 1932—regard such comparisons as *conceptually* meaningless. Intensities are not observable. Even if voters were allowed to express their preferences in cardinal terms, the numbers would not measure intensities. In democratic theory, this position is adopted by Tännsjö (1992, 31–32) and by Riker and Ordeshook (1973, 112). It also seems to be Arrow's own position. For this reason, he has been labelled as a "positivist" by some authors (Harsanyi, 1979, 302). However, Lehtinen (2007) remarks that in voting contexts, when there are more than two alternatives, ordinal preferences are no more observable than cardinal preferences. If choices have strategic aspects, even ordinal preferences cannot be inferred directly from a series of pairwise choices. A strictly verificationist criterion of meaning may rule out even judgments about ordinal preferences as "meaningless" (As a general philosophical programme, verificationism seems to be out of business in any case).

Second, some others see interpersonal comparisons as *ethically irrelevant* even if they were available. According to Schwartz,

> there are worthier and more likely purposes served by instituting collective-choice processes than satisfying participants' preferences to the greatest possible degree: such purposes are to distribute power widely, minimizing the abuse of power, to broaden the pool of ideas by which choices are informed, to enhance people's sense of participation in institutions, and to institutionalize orderly shifting of power. To favor people with intense preferences is to favor people who are bigoted, greedy, meddlesome, etc. (Schwartz, 1986, 30–31; cf. also Baier, 1967/1982, 289; Jones, 1983, 162; Rawls, 1971, 230–231, 361; Saward, 1998, 78; Shapiro, 1990).

The utilitarian principle might be conceived as the *fourth* criterion of a good decision-rule, partly competing with the plurality, Condorcet, and Borda principles (Riker, 1982, 95–97). However, the validity of the utilitarian principle—"satisfying preferences to the greatest possible degree"—is disputable. It is not obvious that the strong sentiments of a "bigoted, greedy or meddlesome" minority should override the less intense preferences of a majority. But, as we saw, the intensity comparisons are not only in the interest of the maximizing utilitarian. For example, most notions of fair distribution presuppose some forms of interpersonal comparisons.

Third, some theorists think that interpersonal comparisons are *practically* useless in democratic theory, as—although they may be measurable in principle—there is no effective and/or morally acceptable way to make the comparisons needed in collective decisions. If the first and the second argument above could be ignored, a utilitarian theory of social good would, in principle, make sense.[30] But the problem of creating an *institutional* system to collect the necessary information would remain. There seems to be no institutional method of making the required intensity comparisons *en masse*—it would not be helpful if such comparisons could

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[30] For a defense of an essentially Benthamite system, see Ng (1979); for a rule-utilitarian version, see Harsanyi (1979); for a sophisticated Millian alternative, see Riley (1988).

be made, say, in laboratory conditions or by using "extended sympathy" in personal interaction (MacKay, 1980, 73–76).

Moreover, even if there were an effective way of making interpersonal intensity comparisons, the best possible method need not be *democratic*. The most plausible conception of democracy contains at least the following normative components: the voters' voting power is (roughly) equal; their choices determine (directly or indirectly) the outcomes; and the choices are free, not coerced or manipulated. It is a defining property of democratic methods that the outcomes are based on individuals' *own* choices or expressed valuations, not on, say, an assessment made by an outside expert. We may have different ways of arguing that a million spent on the health care of poor children is, in terms of justice or human welfare or happiness, better used than a million spent on tax cuts for wealthy people. Public organizations, such as welfare agencies, do make such comparisons, and in making them, they may use scientific information as well as everyday knowledge, empathy and moral argumentation. But the information they use is not inferred from valuations consciously given by citizens, nor are they aggregated by using a method that would ensure procedural equality between the respondents. A reliable method of comparing intensities would, at best, help to establish a government *for* the people. It cannot be used as an instrument of a government *by* the people. (In spite of his alleged "positivism", this is Kenneth Arrow's main concern.) To quote G. Graham (1992, 96–97):

> There is no reason to believe that the maximization of political preferences will require either universal suffrage or 'one man, one vote'. Indeed, it need not imply voting at all. If there is some alternative method by which political preferences may be recorded and measured—a highly plausible supposition—political decisions effecting a maximal distribution of social benefits and burdens may be taken by autocrats or oligarchs, provided that they have access to that method.

For Graham, this is a *reductio* argument against the maximization theory. But Richard J. Arneson, a consequentialist, affirms Graham's conclusion:

> The choice between autocracy and democracy should be decided according to the standard of best results. (. . .) In some possible worlds, probably some past states of the actual world, and possibly in some future actual scenarios, autocracy wins by the best result test and should be installed. Democracy is extrinsically not intrinsically just. (Arneson, 2004, 41)

Generally, many normative theorists of democracy see the intensity problem as irrelevant for the second reason, many empirically oriented political scientists see it as relevant but irresolvable for the third reason, while many theorists of public choice and of social choice see the problem both as relevant and solvable. The obvious response to the third critique would be to propose a *democratic* method which could make systematic intensity comparisons possible. The next task is to look the most popular proposed method more closely.

3.3.2   The Borda Rule and the Structure of Preferences

Those who support the Condorcet criterion seem to have the following intuition: If a Condorcet winner is not selected, the number of those people who are satisfied with the result is not maximal. The essential presupposition in this argument is that we are comparing only the numbers of people satisfied with the result, not the relative degrees of satisfaction. We are making only ordinal pairwise comparisons. Although Condorcet-effective rules do not satisfy Arrow's independence condition (Sect. 4.3.1), they satisfy it more often than other weakly neutral and anonymous rules, for they are *bound* to violate it only in the cyclical cases. This follows from their basic logic: they reduce complex choices to a series of pairwise majority choices. Indeed, Michael Dummett (1984)—who does not himself unreservedly support the Condorcet criterion—thinks that anyone who sincerely adheres to the absolute-majority principle in dichotomous choice-situations must also adhere to Condorcet's principle when there are more than two options. What really matters for a supporter of majoritarianism is the number of people satisfied with the result, not the relative *degrees* of satisfaction.

According to Dummett, however, the number of satisfied voters cannot be relevant as such. Ultimately, even the majority principle derives its normative force from "total satisfactions". As he says

> the question turns on whether it be thought more important to please as many people as possible or to please everyone collectively as much as possible. The latter is surely more reasonable. *The rule to do as the majority wishes does not appear to have any better justification as a rough-and-ready test for what will secure the maximum total satisfaction*: to accord it greater importance is to fall victim to the mystique of the majority. (Dummett, 1984, 142; my emphasis)

In this interpretation, all voting rules are seen as imperfect measures of the maximum total satisfaction. However, majority rule is not a particularly good measure of total satisfaction unless we have reasons to believe that the intensities are equal (cf. Riley, 1990). In order to make the matter clearer, let us consider the following case:

Example 3.10

51 voters	49 voters
a	b
b	c
d	d
c	a

In this example *a* is the absolute majority winner, and therefore a Condorcet winner too. One might, however, argue that there could be a good case for selecting *b* instead of *a*. Although a slight majority favours *a*, for a large minority *a* is the worst alternative, while *b* does not offend anyone. It is possible that, by selecting *b* instead of *a* we may increase the "total satisfaction". We may also say that in this case, *b*, rather than *a*, is a more acceptable compromise between competing

opinions. Various point-counting rules, of which the Borda count is the best known, would select *b*. If the voters are allowed to give three points for their favourite, two points for their second choice, etc., *b* would receive a total of 249 points against *a*'s 153 points. In the example, *b* is the Borda winner. Similarly, if approval voting is used, and if at least some of the supporters of *a* are willing to approve *b*, then *b* is selected. Finally, if voters may cast a negative as well as a positive vote, *b* is likely to be the result.

The example also shows how intensity considerations may be justified in terms of political fairness (rather than in terms of "total satisfaction"). Suppose that we want to avoid Dahl's problem by giving the minorities some real power over the outcomes. If any minority smaller than one half of the voters had the power to determine some outcomes, the system would be non-decisive, for obviously there could be more than one minority making the claim at the same time. If only some nameable minorities had the power, the resulting quasi-corporativist rule would violate anonymity. Finally, a general (non-neutral) minority-veto would favour conservative minorities. In contrast, the Borda count would give more power to the minorities without violating May's equality conditions. For example, with four options, the Borda count guarantees that a majority cannot dictate the outcome in all possible situations unless it is larger than three-fourths (Nurmi, 2007, 116–117). A comparison with approval voting—which is sometimes considered as a "utilitarian" rule (see Hillinger, 2005)—is illustrative. Unlike Borda, approval voting allows that a narrow majority can guarantee the selection of its favoured outcome under sincere or coordinated strategic voting (Baharad & Nitzan, 2005). Consider Example 3.10 again. If the 51 voters approve only the alternative *a*, approval voting selects it in spite of the strong and intense opposition of 49 voters. This problem can be mitigated by requiring that the voters *should* vote for at least two alternatives. But this solution would make the rule less sensitive to intensity considerations. Even voters who sincerely reject all but one alternative on a list would be forced to give an equally weighty vote for some of the options rejected by them.

In terms of May's conditions, the Borda count fares better than most voting rules. It satisfies the requirements of anonymity, weak neutrality, decisiveness and strong monotonicity. And, as Saari (1995) has shown, no other positional rule does better than the Borda count. Because it possesses the relatively rare *strong* monotonicity property, it guarantees that *all* changes in voters' preference orderings may have an effect on the final choice.[31] This is not the case with the other rules—for example the runoff, STV, supplementary vote, or Bucklin rule—that allow the

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[31] A reminder: May's *strong* monotonicity (or *positive* responsiveness) condition requires that if a voter changes her vote to favour an otherwise winning option it remains a winner, and if she changes her vote to favour an otherwise tied option it becomes a winning one—unless there are simultaneous changes to the opposite direction. Nurmi (1987, 77–78) shows that the Borda rule and the amendment rule—unlike most rules in general use—satisfy this requirement (*contra* Mackie, 2003). As Nurmi says (p. 69) it is "something of a luxury"; however, it guarantees that all information on voters' preferences is utilized in decision-making and thereby maximizes the power of an individual voter.

expression of some lower preferences. For these reasons, the notion of a Borda winner may look like an attractive alternative to the Condorcet criterion. It partly agrees with our majoritarian intuitions while leaving some room for other considerations. For example, Dummett's conclusion is that the Borda criterion and the Condorcet criterion should be treated as equally valid – by treating the latter as more important we would fall victim "to the mystique of the majority, which is only a superstition engendered by familiarity with the use in practice of majority procedures" (Dummett, 1984, 142).

However, these purely formal results do not yet show that differences in Borda scores can actually be interpreted in terms of intensity differences. In his book, *Voting Procedures*, Michael Dummett recognizes that many arguments for and against various voting rules are based on suppositions about typical preference structures. He criticizes, for example, the plurality criterion, which looks only at the first preferences. As he remarks, one ground upon which it can be defended is the supposition that "the gap in any voter's preference scale between any outcome other than his first choice and the next outcome on his scale is not merely small, but infinitesimal, in comparison with the gap between his first choice and his second" (ibid., p. 132). This supposition concerns the *empirical* nature of intensity differences, and although it may hold in some cases, it is just one possibility among many. Consider a case in which the plurality rule is used to produce a full ranking between alternatives, rather than just choosing the best one:

Example 3.11

99 voters	1 voter
a	c
b	b
c	a

According to the plurality criterion, *c* is the second-best alternative, for *c*, unlike *b*, appears as the first in the preferences of at least one voter. Nevertheless, *all* voters except one rank it lower than *b*. "Certain gaps", says Dummett, "between consecutive outcomes on an individual voter's preference scale may be small, others large; but there can be no general rule for determining which". This is plausible; there seems to be no universal reason why voters themselves would put all the weight on their first preferences. In some cases the distance between the best and the second best may be negligible.

Dummett's conclusion, however, is less plausible: "the only general rule we can reasonably adopt is that all the gaps are not merely comparable, but equal" (ibid., p. 133). This sounds like an application of the Principle of Insufficient Reason. Dummett's argument seems to be this: if we do not know what the actual differences are, we have to treat them as equal. [32] But consider the following possibility: The 51 voters in Example 3.10 above are actually almost indifferent as between

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[32] This was Borda's own argument for his rule. It was accepted by Laplace (1814/1902) and by Lindelöf (1862a, 1862b, 1862c; see Sect. 1.2 above), but criticized e.g. by Black (1958).

alternatives *b, d* and *c*, but they all agree that these alternatives are *much* worse than *a*. The 49 voters who favour *b* have no intense preferences over the issue. They could almost as well accept some other result. The measured 'intensities' are, in this case, products of the instrument of measurement; the plurality rule would measure them more accurately.

It may be argued that all voting rules have to be based on *some* suppositions about the nature of intensity differences. For example, approval voting allows voters to reveal, if not the full range of intensities, at least some differences between alternatives. Roughly speaking, it is based on the idea that voters have dichotomous preferences. They can divide the alternatives into two groups: those that they can accept and those that they cannot. Brams and Fishburn (1983) have shown that under this particular condition, approval voting has many excellent properties—it does, for example, choose a Condorcet winner. There is also some discussion on voting rules based on the supposition that voters' preferences are trichotomous. For example, voters might give one vote for their favorite and a half vote for the second-best (Dabagh, 1934). Or they might be allowed to cast one or more votes for their most preferred candidates and one "negative" vote against the least-preferred one. Hillinger (2004) defends a version which gives even more room of movement for the voters: they would be free to give a positive or a negative vote for as many candidates as they like. As a sort of compromise between the plurality and the Borda rule, Dummett (1997, 167–173) recommends a weighted Borda rule which awards, for example, six points to a party standing highest in a voters' ranking, two points to the second highest preference, and one to the third.[33] Such weighted versions of Borda have actually been used in elections (see Sect. 3.1.4). However, there are infinitely many ways to assign the weights. This seems to undermine the third rationale for intensity comparisons mentioned above: instead of the Condorcetian cycle and the Arrovian impossibility we get indeterminacy (Feldman, 1980, 193–194). [34] As suppositions about the nature of preferences in general, all the alternative ways to assign the weights seem to be *ad hoc*. While any of them may be reasonable on some occasions, none of their background suppositions is universally true.[35] We cannot say that the distances between alternative candidates in voters' preferences generally tend to be equal; nor can we say that voters generally tend to group candidates into two or three sets. All the rules suppose what should be proved. If voters' preference orderings are of the "wrong" type, the results are likely to violate the background justifications of the rules.

It is sometimes argued that all voting rules are based on "interpersonal comparisons" and, more specifically, that even behind the majority principle there is an

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[33] When making this proposal Dummett, in effect, abandons his earlier "insufficient reason"-argument.

[34] Indeed, Sugden (1981, 143) admits that his intensity-based argument does not pick the Borda rule as the uniquely best "neo-utilitarian" rule.

[35] Niemi (1984, 952) calls the idea of dichotomous preferences "a contrived and empirically unlikely assumption". Empirical studies on voter preferences (for example, Radcliff, 1993) tend to confirm this view.

unarticulated supposition that intensities are equal. Some theorists (for example, Riley, 1990) justify the majority rule by appealing to something like Dummett's Principle of Insufficient Reason: if do not know the intensities, we have to treat them as equals. However, it is not necessary to conceive voting rules in terms of "rough-and-ready tests of total satisfaction". Instead of arguing that we have to treat all voters equally because do not possess the relevant knowledge about the nature of differences between voters, we may argue that these differences are ethically irrelevant, and that the choice of a voting rule should rather be based on other considerations.

3.3.3   Saari's Argument for Borda (and Against Condorcet)

We have seen that many defenders of the Borda criterion, including Michael Dummett (1984), Donald G. Saari (1995), and Robert Sugden (1981, 144) see it essentially as an imperfect but practicable intensity-measuring device. However, Saari has also provided a sophisticated and extremely interesting argument which is independent of the intensity considerations. Here, I try to present a short sketch of the basic argument. Consider, first, the following situation

Example 3.12

5 voters	3 voters
a	b
b	a
c	c

Here, *a* is both the Borda and the Condorcet winner. Now, let us add nine new voters whose preferences exhibit the familiar Condorcet paradox:

5 voters	3 voters	3 voters	3 voters	3 voters
a	b	b	a	c
b	a	a	c	b
c	c	c	b	a

According to Saari, these nine additional voters are tied; hence their votes should not be able to change the initial outcome (Analogously, if we add three voters who prefer *a* to *b* and three with the opposite preference, this group of six is tied, and should not change the outcome). However, in this new setting, *b* becomes the Condorcet winner. Alternative *b* beats alternative *a* 9–8 and alternative *c* 11–6. In contrast *a* remains as the Borda winner, even after the invasion of the nine new voters. Their votes—three first places, three second places and three third places for each alternative—cancel out one another. According to Saari, *this phenomenon accounts for the whole of the Arrovian indeterminacy problem.*

Saari introduces two intuitively plausible symmetry requirements.

The *Neutral Reversal Requirement*: When two rankings reverse one another, say $a > b > c$ and $c > b > a$, they are tied and do not change the outcome.

The *Neutral Condorcet Requirement*: When n rankings over n alternatives form a complete cycle, say $a > b > c$, $b > c > a$ and $c > a > b$, they are tied and do not change the outcome.

Majority rule respects the Neutral Reversal Requirement but not the Neutral Condorcet Requirement. In contrast, all positional rules (including the plurality and the Borda rule) respect the Neutral Condorcet Requirement, but *only* the Borda rule also respects the Neutral Reversal Requirement.[36] Thus, the Borda rule is the best voting rule. According to Saari, this conclusion can be challenged only by showing that the Neutral Condorcet Requirement is not relevant, in other words, that a symmetrical cycle between alternatives should *not* be treated as a tie.[37]

The real defect of the Condorcet criterion is that pairwise comparisons do, according to Saari, disregard some important information about the preferences of the voters. Pairwise majority comparisons are unable to make a difference between intransitive individual preferences and collective preference cycles formed from transitive individual preferences. Consider a voting cycle formed from pairwise comparisons: *a* defeats *b*, *b* defeats *c* and *c* defeats *a* in a series of majority contests. This may result from an underlying Condorcetian cycle. But it might also result from intransitive *individual* preferences. Some voters have simply voted in an irrational way. We cannot tell the source of intransitivity by looking at the voting results. Saari's point is not that such a situation is likely to occur, or that a voting rule should be able to deal with it; the point is that a good rule should distinguish between the situations. The requirement that the final choice or ranking should be based on pairwise comparisons is too strong, for it does not permit the distinction between the violations of individual and of collective transitivity. By excluding all information not related to the ordinal preference rankings, it also excludes essential information about the nature of these rankings. As Saari puts it, "losing the intensity information corresponds to dropping the critical assumption that voters have transitive preferences". The Borda rule is the only one that satisfies the *binary intensity independence* condition which requires that the relative ranking of each pair of alternatives be determined by voters' relative rankings of that pair and that

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[36] There are infinitely many positional voting rules (Feldman, 1980); thus, the result showing the unique status of the Borda rule among them is highly significant. Notice, however, that Saari's uniqueness result is related to *ordinal* rules only. Utilitarian voting rules which go beyond ordinality, like Heckscher's "immanent method" (a.k.a. range voting) also satisfy Saari's two neutrality requirements.

[37] At least in planning and in ethical contexts where individual rankings may represent different decision criteria rather than individual preferences, a cyclical result cannot be automatically treated as a tie, that is, as indifference between the alternatives involved in a cycle. Rather, it may be interpreted as incommensurability between different criteria of goodness.

the intensity of this ranking is determined by the number of candidates ranked between them (Saari, 1995, 189).

Saari's writings are not only mathematically innovative but also philosophically sophisticated. He sees the Arrow theorem as one instance of a general problem of information aggregation, and finds interesting analogical problems in sports, statistics, law, engineering, and economics. All his examples illustrate the problems which emerge when we try to understand or evaluate a whole by aggregating information achieved from its parts. He warns: "Expect paradoxical phenomena whenever there is a potential discrepancy between the actual unified whole and the various ways to interpret the totality of disconnected parts" (Saari, 2001a, 2001b, 104).

The great merit of Saari's approach is that several apparently unrelated but somehow "paradoxical-looking" phenomena are shown to be instances of a single general problem. It does not follow, however, that there exists a corresponding single *solution*, applicable in all contexts. My thesis is that voting in political contexts has specific properties which are not present in the other cases discussed by Saari. Consider the following example (which, of course, has been presented many times before):

Example 3.13

3 voters	2 voters	2 voters
a	b	c
b	c	a
c	a	b

In this case, introducing a Pareto-dominated alternative $c*$ *reverses* the whole ordering of alternatives. Without it, a gets 8, b gets 7 and c gets 6 points When it is introduced, the Borda scores are: 6 for $c*$, 11 for a, 12 for b and 13 for c.

3 voters	2 voters	2 voters
a	b	c
b	c	$c*$
c	$c*$	a
$c*$	a	b

Other preference counting rules—STV, the Bucklin rule, and the supplementary vote—produce similar if somewhat less dramatic anomalies (On a similar anomaly in STV, see Doron, 1979). These effects cannot plausibly be interpreted in terms of intensity differences. Suppose, for example, that $c*$ is in all essential aspects identical with c, but contains a technical defect and is therefore considered worse than c by all the voters. For an informed decision, its presence on the agenda is totally irrelevant, for it does not contain any new aspect not already contained in c.

Example 3.13 shows that the agenda-setting process is crucial for the Borda rule. The arguments presented above are, of course, well known also by the proponents of the Borda rule. Some of them (for example, Dummett) have argued that agenda

manipulation is less likely to cause troubles in real elections, for it may be difficult to produce suitable "dummy" alternatives such as c^* in the example above. Mackie (2003, 153–155) claims that someone who tries to manipulate a voting rule by addition or subtraction of alternatives needs to know voters' exact preference rankings, including their rankings over manipulative alternatives (such as c^*). In order to assess these empirical claims, let us consider the almost only example of the use of the Borda rule in politically important decision making[38]: the choice the candidates for the office of *Beretitenti* or the president in the island-state of Kiribati. According to the constitution, the legislature (*Maneaba ni Mauangatabu*) of Kiribati chose three or four candidates; and one of them was elected by the people to the office. The candidates were selected in the *Maneaba* by using a limited version of the Borda count. There could be many candidates, but members of the *Maneaba* were allowed to rank four of them. Those four having largest scores were allowed to continue in the final (popular) contest. In 1991, there were eight candidates presented for the *Maneaba*. According to Ben Reilly (2002, 367–369), there was extensive strategic voting in which two of the most popular candidates were played out from the final election. Two of the running candidates were "dummies". Their role was the same as that of the alternative c^* in our example: by voting a "dummy" alternative the voters could avoid giving any lower preference support for the most serious challengers of their favourite candidates. In the only politically relevant real-life case described in the literature, the Borda count worked *exactly* as its critics expected it to work. Reilly quoted another commentator of the Kiribati election "It remains to be seen just how long such a system will be tolerated which has the effect of eliminating popular candidates through backroom political maneuvering" (p. 368). Actually, the system *was* abolished in 2002—in the same year that Reilly published his article.

This form of manipulation is particularly attractive when the Borda count is used. Serais (2008, 8) states that in three-candidate Borda elections the *a priori* probability of situations which can be manipulated by "cloning" alternatives is always over 40 %, and approaches rapidly to 62 % when the number of voters increases. *Pace* Mackie, the manipulators need not to know the exact preference rankings; it is sufficient for their purposes if they can produce alternatives which are generally perceived as 'clones' of their preferred alternative. The resulting multiplication of the Borda scores guarantees that *some* among the essentially similar alternatives will be selected—unless, of course, the other groups are able to use the same strategy.

There is a further problem, related to underlying presuppositions concerning the preference structures (Sect. 3.3.2). The Borda rule is likely to produce larger set of candidates than, say, the plurality rule. Any rule that takes some of the lower

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[38] See, however, Fraenkel and Grofman (2014) on the Dowdall system used in Nauru and the limited version of Borda used in Slovenia. Their study confirms the general picture: in politically important elections Borda-like systems actually invite agenda manipulation and strategic voting.

preferences into account tends to have this effect, even without any conscious attempts to manipulate the agenda. Intuitively, the reason is that candidates who do not have much first-preference support still have some hopes to get elected (Sect. 3.2.4). Ordinary voters are not necessarily able to produce *strict* and *complete* preference orderings when the number of alternatives becomes large (say, over five). It is reasonable to expect that voters are generally able to submit transitive preference orderings, as Saari says. It is, however, less obvious that the rankings submitted by them would always satisfy the strictness or completeness-requirements. If voters are nevertheless required to submit strict and complete rankings (as in the Australian alternative-vote elections) an elections result may actually be determined by voters who—when unable to rank all the candidates—fill their ballot papers in a random way. Therefore, a reasonable voting system should either limit the number of candidates, or allow incomplete ballots.

However, while modified versions of the Borda count can handle incomplete rankings, there are inevitable costs (Nurmi, 2007). First, such modifications are vulnerable to a strategic truncation of preferences. In many situations, it is rational not to submit one's complete preference ordering (Sect. 4.3.3). Second, all attempts to modify the Borda rule are likely to undo some of the most attractive properties of the rule. Most notably, the modified versions may elect a candidate who is considered as the worst by a majority of voters (Borda invented his rule for the very reason that he wanted to prevent this anomaly!). Given the effect exemplified in Example 3.13, these results are to be expected: if the removal of a candidate from the contest—c^* in the example—may change the outcome, his removal from sufficiently many ballot-papers may have a similar effect. If these costs are unacceptable, the remaining solution is to limit the number of alternatives beforehand. While this may reasonable in some contexts—for example, in multi-alternative referenda—in general elections it is clearly incompatible with the principle of democratic freedom.

Thus, there is an important difference between voting and the other aggregation contexts analysed by Saari. *Only in the context of voting, the choice of the method of aggregation may change the input of aggregation.* This reflects a general problem shared by many attempts to "apply" the results of social sciences. In engineering, statistics etc., the reality itself does not react to the choice of method of acquiring information about it. Hence, the manipulative aspects of the Borda rule may well be irrelevant in such contexts (on Borda in engineering contexts, see Scott & Zivikovic, 2003; but cf. also Franssen, 2005, 45). To put it simply, while a planner or a designer may try to manipulate the results by choosing suitable criteria or a suitable set of alternatives, the criteria themselves, unlike voters, do not try to achieve anything. In voting contexts, voters' strategies, the composition of agendas, the supply of candidates etc. may vary with the chosen voting rule. This adds to voting situations an additional element of arbitrariness not present in Saari's other examples. The question is not just which method would reflect the objects (voters' opinions) in the most accurate way, but rather, which would be the best method *given the unavoidable interaction between the aggregation process and the objects of aggregation.*

For these reasons, Saari's argument for the Borda rule, brilliant as it is, should be balanced against the defects of the Borda rule discussed above. A *Condorcet-effective rule is sensitive to the addition of new (tied) voter groups*, but, as we saw, the *Borda rule is sensitive to the addition of new (Pareto-dominated) options*. If the Condorcet criterion loses some information about the transitivity of the rankings, the Borda rule uses information of a doubtful nature. The normative interpretation of the Borda rule is, even for Saari, that it is able to take preference intensities into account. But if the number of candidates between a and b in someone's expressed preference orderings may reflect factors other than preference intensities, it is difficult to argue that this information should have an effect on the final choice. Personally, I am unable to decide which form of arbitrariness disturbs me more. When we have the luxury of choosing between the Borda rule and some Condorcet-effective procedure, we should, perhaps, appeal to pragmatic and context-dependent considerations. In some contexts, the Borda rule may be preferable. If the voters are honest, the Borda rule chooses the Condorcet winners more often than any other positional or semi-positional rule. And *if the agenda is fixed,* the effects discussed above cannot occur. The Borda rule may well be the most plausible method to aggregate information in such contexts (McGann, 2006, 22). For example, when we are pooling experts' judgments or the popular judgments on the performance of competing contestants, the "agendas"—that is, the sets of competitors—are exogenously given. In the Euro-song contests Borda is certainly more plausible than any imaginable majoritarian rule! The same may be true about the multi-criteria decision-making: if the alternatives are given, we should only be worried about the possibility of manipulating the result by adding new criteria. In multi-criteria—contexts, adding new criteria is equivalent to adding new voters (as in Saari's example), and the Neutral Condorcet Requirement is one antidote against such manipulation. But in such contexts, "intensities", conceived in the utilitarian way, are not relevant. To conclude, if we decide to use the Borda rule, our reasons should *not* be related to intensity considerations.

3.3.4 Cardinal Voting-Rules

All the rules mentioned above—various versions of the approval, negative and Borda rules—were based on implicit presuppositions on the nature of voters' preference orderings. One may argue that for this reason none of them can reflect intensity differences in an accurate way. The approval and negative votes ask voters to divide the alternatives into indifference classes, while the Borda rule presupposes strong orderings without indifferences. Basically, the information provided by the voters is still in ordinal form. The supposed information about the "intensities" is largely a product of the mechanics of the rules. If, for example, voters with the preference $a > b > c$ cast their approval votes for candidates a and b but not for candidate c, it does not necessarily mean that in their preferences, the "distance" between b and c is larger than that between a and b.

If intensities cannot be inferred from ordinal information, we may perhaps ask voters to present their opinions directly in a cardinal form. Indeed, if (*contra* arguments presented in Sect. 3.3.1), intensity comparisons are meaningful and ethically relevant, it seems that we *should* ask them more rather than be content with arbitrary proxies. Hence utility maximization can be seen as a fourth possible criterion of a good decision-rule (Riker, 1982, 95–99). There are several possibilities. One possibility is the "one-zero" rule: voters are asked to assign the number 'one' to the option they rank highest and the number 'zero' to the one they rank lowest. The remaining numbers are assigned according to the utility expected from them relative to that expected from the most desired option (a number between one and zero). Then all numbers assigned to each option are summed over all voters, and the option that has the highest number is chosen. The second possibility is just to fix the upper limit (for example, the best alternative should get the value one).

In all attempts to formulate a scale of measurement, a problem is involved. For, like the Borda count, such scales do not violate only the *second* aspect of Arrow's independence condition (which excludes the use of non-ordinal information, see Sect. 4.3.1), but also its *first* aspect which excludes irrelevant changes. Consider the second system described above: voters are asked to give number 1 to their most favoured alternative on the list, *etc*. Suppose that the "real" value of an alternative a is, for me, 100 units (whatever this might mean), while the values of alternatives b and c are only 10 and 5, respectively. Thus, when the normalized one-zero scale is used, I have to assign the number 1 to a, 0.1 to b and 0.05 to c. However, there are six other voters, and they do not agree with me in their evaluations. Let us assume that the distribution of the evaluations is as follows:

Example 3.14

Alternatives	1 voter	3 voters	3 voters	Total
a	1	0.1	0.1	1.6
b	0.1	1	0.15	3.55
c	0.05	0.2	1	3.65
d	0	0	0	0

c is then the alternative with the highest total figure (I am the lonely leftmost voter!). Suppose that I reconsider my view: I find out that a is actually only worth 20 units. For me, a is now only two times worth b and four times worth c. I change my numbers accordingly. There are no other changes.

Alternatives	1 voter	3 voters	3 voters	Total
a	1	0.1	0.1	1.6
b	0.5	1	0.15	3.95
c	0.25	0.2	1	3.85
d	0	0	0	0

Now b is the alternative with the highest total figure. While all the individual preferences, *both ordinal and cardinal*, remain unchanged with respect of b and c,

the collective ranking of this pair changes only because my preferences in respect of the third alternative a changes (Ng, 1979, 124). Moreover, the rule does not satisfy the path-independence requirement. Suppose that the alternative with the second-lowest total, a, is cancelled from the first table in Example 3.14. Then I (the leftmost voter) am forced to give value one to b which therefore becomes the alternative with the largest total, although the preferences *and* intensities in the reduced set of alternatives do not change.

These paradoxical consequences result from the requirement that the maximum number one is automatically attached to the best of the available alternatives by every voter. There is no *a priori* reason to suppose that all the voters are equally satisfied when their own favourite among the *available* options is chosen. Consider the simplest and most basic setting in which the will of the majority and the intensity considerations pull in opposite directions. Suppose that there are only two alternatives. Fifty-one voters mildly prefer alternative a to alternative b. The remaining 49 voters perceive the consequences of alternative a as catastrophic, and therefore have an intense preference for b. This is the classic case of a "tyranny of an indifferent majority", the case which worried authors such as Dahl (1956), Kendall and Carey (1968), Anckar (1996) or Karvonen (2004). In this case, both utilitarian and fairness-related considerations seem to be incompatible with majority rule. Letting the 51 voters have their way neither maximizes the sum of the utilities nor protects the interests of the minority. However, in this case, *the Borda rule, the one-zero-rule, and the point-counting-rules all collapse to the simple majority rule*, thus producing the "tyrannical" outcome. Their failure in this most elementary case shows that these "rough-and-ready tests" do not really provide a solution to the traditional problem of unequal intensities. Only a full Benthamite cardinal *and* interpersonally comparable utility function could provide an escape route both from Arrow's circle and from the classical intensity problem. Indeed, a Benthamite utility function would satisfy *all* Arrow's requirements—except the "orderings only" aspect of his independence requirement.

Again, the rules are based on un-argued suppositions about the nature of individual preferences. The one-zero rules are built on the assumption that the most-preferred alternatives on the agenda have the same *maximum* utility, while the point allocation systems are based on the less restrictive assumption that every individual enjoys the same *average utility* across the alternatives. The Benthamite rule is the least restrictive of all: it allows the expression of all kinds of individual preferences. Voters compare the actual alternatives with their *ideal best* (and worst) alternative. They are free to give them any number between, say, 1 and 0, is closest to the original utilitarian idea. This resembles the rule used to select winners in some athletic contests. The outcomes of this system are "dependent on irrelevant alternatives" in a literal way, for the *ideally* best (or worst) alternatives need not be on the agenda or even exist outside voters' imagination. Voters are equally free to express, for example, dichotomous preferences (with three alternatives: 1, 1, 0) or Borda-like preferences (1, 0.5, 0), or to judge all the candidates suboptimal (for example, 0.5, 0, 0). This rule is sometimes called "range voting", but Albert Heckscher, who was probably the first to recommend this kind of rule, used the

term "immanent method" (Heckscher, 1892). Heckscher did not defend it on utilitarian grounds; rather, he argued that it simulated individual deliberation better than its alternatives.

It is easy to see that the Bentham-Heckscher procedure described above is immune to changes of the agenda. If, for example, the best option on the list is midway between my ideal best and my absolute bad (thus getting the value 0.5), it remains there even when the list of the other available options changes. Hillinger (2004) calls such a scale of utilities as "context-independent". The problem with the rule is that in practice, *voters themselves* are not likely to see the scales as context-independent. First, the feasibility of alternatives may well affect judgments on their desirability. Second, if the alternative *a* is the best on the agenda, I lose nothing if I claim that it is actually my ideal. Indeed, such strategic behaviour seems to be almost unavoidable. Consider someone who is deeply dissatisfied with all the options on the agenda, for example, because they do not take her specific needs into account. If she truthfully reports that all the feasible alternatives are very far from her ideal, she effectively disenfranchises herself. For the low "context-independent" numbers given by her will have very little influence in the final counting. In order to make the best of the situation, she should give the maximum number for the most tolerable alternative(s) and the minimum numbers for all or most other alternatives in order to get at least a tolerable result. However, if all voters reason in this way, the rule collapses into the simple plurality rule or to the approval vote. Every voter gives maximum numbers for his or her favourites and zero for the others, and the winner is the option which receives the greatest number of maximum numbers (Tideman, 2006, 175).[39]

This short survey of the "utilitarian" methods concludes the case against intensity comparisons in democratic decision making. We have recognized several trade-offs. Any attempt to relax the second aspect of Arrow's independence requirement (see Sect. 4.3.1: only ordinal rankings are relevant) would inescapably violate its first aspect (truly irrelevant alternatives are not allowed to affect the outcome). Only a full non-normalized Benthamite utility function satisfies the latter. But any attempt to use utilitarian comparisons in decision-making would either make the decision rule extremely manipulable, or remove decisions from the hands of citizens.[40]

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[39] Something similar happens when the cumulative vote is used. Cumulative voting allows a voter to distribute a fixed number of votes among the candidates according to her preferences. Thus, it is an example of a point-voting system, and could be conceived as one possible method for making intensity comparisons. Unlike the Bentham-Heckscher rule, however, it is not path-independent. And, as Felsenthal (1990) has shown, when voters use rational strategies, cumulative vote is reduced to the simple plurality. A vote-dividing strategy never dominates and is often dominated by the strategy in which voters vote for their favourite candidate only. It is reasonable to expect that *all* rules which really give voters an opportunity to express preference intensities suffer of the same problem (see also Jones, 1988, 14–15; Saward, 1998, 77–78).

[40] Tideman (2006, 238) argues that the Borda rule and Hillinger's "utilitarian" voting should be used only when people act as disinterested judges; in other words, only when they do *not* try to

3.3.5 *For and by the People*

In many works informed by the theory of social choice, the underlying supposition
is that the main purpose of voting rules is to aggregate *information*. A voting rule is,
indeed, a means of aggregation. The fundamental issue is how the results of
aggregation are to be interpreted. We may distinguish two different ways to
interpret voting, and, correspondingly, two partly different perspectives from
which a voting rule may be evaluated. According to one view, the task of the
voting rule is to provide information about some independently existing properties
of the world, basically of voters' preferences. Thus, voting is a kind of *measure-
ment*, and the aggregation problems appearing in political contexts are largely
analogous to those appearing in statistics, engineering etc. A voting rule should,
then, be as reliable and exact an instrument of measurement as possible. Most rules
in actual use seem to be rather inexact measuring-rods. For example, Claude
Hillinger (2004) compares voting to measurements in sociology, psychology,
market research etc, and remarks that in these contexts cardinal scales are always
used. "It is only in voting and particularly in political voting, that the scales are
restricted. For this there is no apparent reason, nor, as far as I know, has any
argument in defense of this practice been advanced" (p. 11). Thus Hillinger
(2004, 2005), like Ian Budge (1996, 164–165), argues for cardinal scoring rules.
Budge defends his proposal with the same analogy: "similar procedures are used in
psychological tests and opinion polls with results which are widely accepted"
(p. 165). He comments on the possibility of strategic behaviour: "Voters in the
mass are also likely to assign scores that reflect their true feelings, unless urged to
engage strategic misrepresentation by political parties. *But these can, if necessary
be legally forbidden to do so*" (*idem*, my emphasis).[41] The last sentence reveals one
difficulty in the measurement interpretation of voting. Is it compatible with dem-
ocratic freedom that people—with or without party affiliations—are not allowed to
give voting recommendations to their fellow citizens?

   The problem of strategic behaviour reveals an interesting difference between
voting and measurement. As Sager (2002, 185) remarks, strategic behaviour *may* be
a problem even in social measurement if the subjects expect that the results to be
utilized in decision-making. Consequently, questionnaires are often designed in a
way that makes it hard for informants to see how their answers can influence future
policy decisions. Here, we recognize one important difference between measure-
ment and voting. In voting contexts, the democratic ideal requires that the connec-
tion between the answers given and the future policy decisions *is* as clear as
possible. Indeed, various institutions (for example, proportional representation,

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maximize their *own* utilities. Another work which takes the measurement analogy as granted and,
consequently, treats voters as disinterested judges is that by Balinski and Laraki (2010).

[41] This sentence is a surprising slip in Budge's admirable and otherwise impeccably
democratic book.

bicameralism, representative institutions in general) are often criticized for the *lack* of a visible connection between votes and future policy decisions.

A further argument against the measurement interpretation is that it provides no justification for democratic equality. Suppose that, in order to save election costs, we select 1/10 of adult population as the *demos*. Only those belonging to this selected group are entitled to participate in referenda or in general elections. If we use the modern techniques of random sampling in choosing the *demos*, the distribution of opinions and interests in the demos will mirror the general population very accurately. Consider normal opinion measurements. By using small random samples (*much* smaller than 1/10 of the electorate), the pollsters are able to predict the choices of the total population with a great degree of precision. With an enormous sample of 10 % of the total population, the deviation would be negligible. The randomly composed *demos* would elect the same candidates and vote for the same parties in equal proportions as the entire population. If the main purpose of voting were to provide information, recording everybody's preferences seems to be just a waste of time and money.[42]

There is, however, another possible interpretation of voting. It should not be seen mainly as a means to get information. It is primarily an *exercise of power*. To take the obvious case, when voting in a parliament, the MPs are not providing information *about* their opinions. They are making binding decisions *based on* those opinions. Elections can be interpreted in the same way. It is, of course, plausible to say that an elections result usually provides information, mostly about the relative popularity of parties and candidates but also about other issues (for example, the turnout rates may measure political alienation). The *main purpose* of elections, however, is not to provide information but to choose the most popular candidates. A good voting rule should produce outcomes which are recognized as legitimate. In order to produce legitimate results the rule must be compatible with the background values; in democracies these values include equality, liberty, and effective voter influence.

There is a more general philosophical lesson in this distinction between measurement and voting. Real-life rules of social choice do not connect voter's preferences directly to outcomes. Instead, they connect *expressions* of preferences—votes—to outcomes. Suppose that we had a measurement device that would connect (ordinal or cardinal) preferences directly to outcomes, say, by measuring peoples' neural states. Suppose, moreover, that officials—a benevolent autocrat or a central planning agency—would then implement those outcomes that were picked by the aggregated measurement results. Would that constitute a democratic arrangement? The answer is, I think, no. Why? In the thought example, there would be no element of popular *choice* or *authorization* by the citizens. The citizens' role would be a purely passive one. The system would constitute a

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[42] Fishkin's "deliberative poll" (Fishkin, 1991) operates with a randomly selected *demos*. However, although he recommends its use as an aid in democratic decision-making, he does not propose that it should *replace* general elections.

government *for* the people, not *by* the people. It would give people what they desired, not what they would have desired *when knowing that a public expression of their desires causally contributes to, and therefore makes them responsible for, the resulting outcomes*. These are likely to be different things: the authoritative nature of the voting process forces voters to consider their preferences and the way their votes are connected to the outcomes. Because voting is also an exercise of power, voters are—and should be—moved by motives which are not operative when the same people are filling in questionnaires or answering questions in an opinion poll. As Saward (1998, 35) says, an opinion poll can gather expressions of preference, but they are not preferences which reflect the fact that people are aware that their expressions will decide anything.[43]

3.4   Applying Social Choice: Referendum-Rules[44]

Many people argue that in an ideal democracy, all citizens would participate directly in all decision making. Although this ideal cannot be realized in a large modern state, direct decision-making methods should be used whenever they are feasible. In a modern state, a referendum is the best approximation of direct participation. Those who are unwilling to accept the argument are often accused of elitism. It is supposed that the only relevant question is whether people are held as sufficiently competent to make decisions directly rather than through representative mechanisms. This reasoning, however, ignores one aspect of decision making: the role of agenda formation. In all decision making, the content of decisions largely depends on the way in which the issues are formulated. In this chapter, my aim is to focus on one aspect of agendas in direct decision making, namely the number of alternatives voted on. Interestingly, there is very little theoretical discussion on these problems in the referendum context. In the normative works on democracy, the dichotomous setting is taken as self-evident. In the empirical literature (e.g. Budge, 1996; Butler & Ranney, 1994; Bowler, Donovan & Tolbert, 1998; Setälä, 1999), the issue is sometimes mentioned, but almost never treated in a systematic way. In the theory of social choice, parliamentary practices and electoral

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[43] Fishkin (1991, 83) quotes a study on opinion measurements: "Most respondents feel obliged to have an opinion, in effect, to help the interviewer out. (. . .) In effect, opinions are invented on the spot."

[44] "Referendum" is used here as general term for popular vote. Quite often, the term is used to refer to cases in which a legislative proposal, a constitutional amendment or (at the local level) a decision made elsewhere is submitted to the voters who can either ratify or reject it. *Ad hoc* direct decisions which are not legislative acts and which are initiated by the government are often called "plebiscites" while proposals initiated by citizens are called "people's initiatives". Here, they are dealt with together. There are important differences between, say, a plebiscite on independence in a separatist province and a regular referendum in a Swiss canton. Nevertheless, the social choice properties of the voting-rules may be similar.

rules are analysed in detail (e.g. Felsenthal, 2012; Nurmi, 2012), but the referendum rules are generally ignored. Nevertheless, there are several ways to conduct multiple-option referenda in actual use. Many of these methods are not used in other decision-making contexts.

3.4.1   Social Choice and Weber's Problem

Typically, referendum democracy presupposes two things. First, issues that are voted on can be treated separately. Second, the number of meaningful policy alternatives in every referendum is two. If these two suppositions are in force, decision-making can be reduced to a series of separate dichotomous acts of choice. The intuitive appeal of dichotomous choice is related to the intuitive strength of the simple majority rule. The celebrated May's Theorem (Sect. 2.2.1) seems to capture at least some part of our pre-theoretical idea of fairness embodied in the simple majority choice. It simply says that when there are two alternatives, the simple majority principle is the only rule which satisfies the decisiveness, anonymity, neutrality and monotonicity requirements. This result has impressed many theorists of democracy. It seems to show why the simple majority rule is a fair way to make decisions.

However, the even more famous Arrow's Theorem (Sect. 4.1.1) shows that when there are three or more options, all logically possible voting rules violate at least some intuitively plausible conditions. One possible way to avoid the problem is to reduce the number of options on agendas to two. This is, indeed, the case in most nationwide referenda: they provide only two alternatives for voters. Some proponents of direct democracy argue that this property of referenda would actually make them immune to the criticism based on the theory of social choice. The distribution of votes does not create any problems of interpretation. Most notably, cycles and strategic voting are excluded (Barber, 1984, 204–205; Budge, 1993, 153; 1996, 117).[45] For example:

> [the paradoxical situations] may be more likely to emerge in legislatures rather than populations, given the tendency for the less informed to use simplified decision procedures which do not involve the preference orderings over all alternatives needed to generate the [voting] paradox. The very tendency of ordinary citizens to consider each issue separately (to consider preferences on welfare, for example, separately from preferences on taxation) tends to rule out cycles and paradoxes. (Budge, 1993, 153; for this argument, see also Barber, 1984, 204–205; Budge, 1996, 117; Nino, 1996, 136; Radcliff, 1992, 43–45; Saward, 1998, 74)

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[45] For an opposite argument, see Ankersmit (1996), 408: "Arrow argues here that no rules that are both workable and ethically acceptable can be developed for translating the wishes of the voters into actual policy. *In fact, this theorem is fatal for all conceptions of direct democracy* (…)." (emphasis EL).

However, the limitation of choices transfers an essential power to those whose task is to formulate the alternatives submitted to voters and to exclude other choices. Although a majority choice between two alternatives is, in itself, fair, the way in which agenda-setters end up with just these particular alternatives may be very unfair. Some potential option excluded by the agenda setters might have been more popular than either of the alternatives submitted to the people. This unfairness is easier to conceal than the unfairness of a decision rule (Riker, 1982, 63, 65).

The agenda problem is especially clear when the agenda power is in the hands of a small number of political actors—say, of a government or a President. It is obvious that the plebiscites organized in authoritarian systems (by Hitler, Mussolini or Pinochet, for example) have no genuine legitimating force. Even when votes are honestly counted and voters are not subjected to coercion or intimidation, the alternatives put forth in authoritarian plebiscites are not created in an open and non-manipulative agenda-formation process.[46] Even in established democracies, the agenda may be sometimes perceived as unfair. For example, in the referendum in Australia (1999) voters were asked to choose between monarchy and a republic headed by an indirectly elected President. 54.9 % of the Australians voted for the monarchical form of government, although, according to some opinion polls, over 80 % of them actually preferred a republic. According to many commentators, most Australians would have voted 'Yes' for a republic with a *directly* elected President, but preferred a monarchical government to a President appointed by the Parliament (Higley & MacAllister, 2002; Mackerras & Cotton, 2000). Mitchell's (2002) detailed study of opinions shows that the direct election alternative was a Condorcet winner. But it was not on the agenda.

Sometimes the interpretations of the results of referenda have caused real crises. A cabinet crisis in Tasmania in 1981 was triggered by a referendum, in which

> electors were told that both houses favoured a new hydroelectric scheme on the Gordon River and they could choose whether it would be placed below the junction with the Franklin River or above the junction with the Olga River. A third of the ballot papers were marked "no dams"; 45 percent of those were declared invalid because their marking departed from a strict interpretation of the special statute under which the referendum had been conducted. (Hughes, 1994, 169–170)

Arguably, some issues are "naturally" dichotomous: the Swedish referendum on whether cars should be driven on the right or on the left side of the road (1955) may provide an example. Further, some issues are dichotomous for institutional reasons. Because Denmark was already a member of the European Community, the Danish voters could reject the Maastricht treaty in a referendum (1992) without excluding themselves from the European integration, while in the new member candidate countries (Austria, Finland, Norway and Sweden), voters had to either accept the

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[46] About the strategic use of plebiscites in the French Fifth Republic, Chile and in the post-Soviet states, see Walker (2003) and Altman (2011, ch. 5). For the history and political theory of plebiscitary rule, see Denquin (1976).

whole package or reject membership.[47] In these countries, the voters were faced with an either-or choice, not because different "degrees" of membership were impossible in principle, but because these alternatives were not allowed by the institutional setting. In most political issues, however, the choice is not *self-evidently* a dichotomous one. The most obvious examples of artificial misuse of the referendum device are "ratification referenda" in which people are, for example, asked to accept or reject an entire constitution with all its details, or to give their assent to a regime or to a complex package of policies. In such cases the "no" alternative need not have any specified meaning. Voters are left to make their own guesses of what effects their choice might have. They cannot be sure whether a new constitution drafted after the rejection of the original proposal would be better or worse than the rejected one, or whether the regime would really abdicate, or how it would change its policies after a popular vote of non-confidence. Nor can the government learn what went wrong if the package they offered for the people was rejected.

Thus, one branch of political thinking sees the dichotomous nature of referenda as a defect rather than a virtue. According to Max Weber

> both as an electoral and a legislative instrument, the popular referendum has inner limits which follow from its technical peculiarity. The only answers it gives are 'Yes' and 'No'. (Weber, 1918/1994, 225)[48]

Erich Kaufmann, a conservative German legal theorist and Weber's contemporary, wrote in a similar vein:

> By the very nature, so called direct plebiscites do not permit the plurality to take positive, substantive action. It can only answer the question that is put to it with yes or no. (...) Everything depends on the content of the question—and the plurality cannot participate or even exert influence over its formulation. Here there is no deliberation, no discussion, no possibility of amendment - only consent or denial of consent. This is the first law of formation of the people's will: the more directly the people as plurality wishes to speak, the less influence it will have on the substance of what actually happens. (Kaufmann, 1931/2002, 201)

Weber argued that a referendum cannot work as an instrument of compromises. Moreover, because a negative answer delivered in a referendum does not provide information about the reasons behind the rejection of the proposal in question, it cannot effectively guide official action. Both problems are related to the dichotomous nature of choices. Another social choice argument—which could be interpreted as a formal version of Weber's argument—emphasizes the arbitrary

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[47] In Denmark, there were two referenda on the European integration: one on the Maastricht Treaty (1992) and another on its amended version, the Edinburgh Agreement (1993). Only 49.3 % of the Danish voters accepted the original treaty, while 56.7 % accepted the amended version. Justesen (2007) estimates that in a plurality contest between three options (the original treaty, the amended version and no treaty), the amended version would have been a plurality loser, preferred to the other alternatives only by 12–29 % of the electorate. Nevertheless, it was a Condorcet (and Borda) winner.

[48] Weber's argument became a commonplace in the inter-war German discussion, for example Schmitt (1928/2008, 278, 303–305).

nature of referendum results rather than their manipulability. For example, Philip Pettit (2003) argues that a series of uncoordinated yes-no majority choices may easily lead to a combination of outcomes which is unwanted, impractical or even mutually inconsistent (Sect. 5.6.2).

However, as we shall see, there is no inherent reason why a referendum should be arranged between only two alternatives. Weber's claim that 'Yes' and 'No' are the only possible answers is untrue. However, if there are more than two options, the social choice problems become, again, potentially relevant.

3.4.2 The Problems of Plurality, Again

The plurality rule is one of the oldest and most popular ways to choose between several candidates. In nation-wide referenda, it has been used for example in Puerto Rico (1993 and 1998), Singapore (1962), Guam (1982) and Curacao (1995). In Sweden, it has been used twice: in 1957 (referendum on supplementary benefits) and in 1980 (nuclear energy). In the 1996 Slovenian referendum on the electoral system the criterion of winning was not clearly specified. At least one instance of the use of the plurality runoff method can be found: in the referendum on the future status of Newfoundland (in 1948) there were two rounds. The Australian unofficial referendum on the national anthem (1977) used the instant-runoff rule.

The plurality rule has its well-known problems (see Sect. 3.2.2). To recall some of them, consider the following example:

Example 3.15

24 voters	36 voters	40 voters
a	*b*	*c*
b	*a*	*a*
c	*c*	*b*

The example shows why the plurality rule is problematic from the majoritarian point of view. If all the voters in the example vote according to their preferences, the plurality rule chooses *c*. Still, the majority of the voters (60 of them) consider it the *worst* choice. In the example, *a* is the Condorcet winner, that is, the option which would win all pairwise majority comparisons. Option *c* is an absolute loser, that is, the one regarded as the worst by an absolute majority.

Further, plurality rule is subject to agenda manipulation because the presence or absence of losing options may determine the final choice. Let us assume that in a situation depicted in Example 3.15 the agenda setter favours *c*. Suppose that the original set on the agenda is {*a,c*}. To prevent the victory of *a*, the agenda setter contrives a third option, *b*, which is likely to divide the opponents of *c* so that the latter becomes a plurality winner. In order to prevent ambiguous results, committees and legislative assemblies almost invariably use methods that are more

complex and allow the expression of preferences other than the first. One may argue that plurality is particularly unsuitable for legislative purposes.

The Swedish consultative referendum on nuclear energy in 1980 provides an example of the problems involved in plurality rule. In the referendum, Line 1 was clearly pro-nuclear and Line 3 was equally clearly anti-nuclear, while Line 2 (put forth by the Social Democrats, who were mainly for the use of nuclear power, but could not join a common campaign with their Conservative opponents) was basically pro-nuclear, but called for research on renewable energy sources, a tightened security control and state ownership of all important energy-producing plants in the future.

The result was the following:

Line 1	18.9 % of the votes
Line 2	39.1 %
Line 3	38.7 %

Line 2 was considered the winner. One may wonder how the numbers would have had to be interpreted if a plurality (but not a majority) of the voters had supported Line 3. According to Setälä (1999, 110–123), the interpretation problem was visible from the start, and no consensus was reached. The leader of the Centre Party, Torbjörn Fälldin, took the position that votes for Line 1 and Line 2 should be considered pro-nuclear votes. The chairman of the national campaign for Line 2 argued that if Line 2 and Line 3 together received an absolute majority, nuclear power plants should be closed. The Social Democratic leader, Olof Palme, maintained that if none of the proposals achieved an absolute majority, Line 2 should be implemented even if it were a plurality loser. The ambiguous outcome of the referendum allowed the pronuclear power parties, who had a majority in the Riksdag, to settle the issue. In the words of one commentator:

> in effect there were two pronuclear energy options, the Conservative and the Social Democrat-Liberal, against one antinuclear option, supported by the Centre and the Communist parties. Thus the referendum seemed slanted against the antinuclear option. The ambiguous outcome of the referendum allowed the pronuclear power parties, who had a majority in the *Riksdag*, to settle the issue. But some believed that the antinuclear option would have been victorious in a straight fight with just one pronuclear option. (Bogdanor, 1994, 76)

A somewhat similar problem of interpretation appeared in Sweden in the 1957 referendum on supplementary benefits. The Social Democratic proposal was supported by a plurality (45.8 %), while the two competing proposals of the non-socialist parties shared the rest of the support. Hence, the reform was postponed until, after several votes in the Parliament, the Social Democratic proposal won with one vote.

The other uses of plurality rule in referenda have been equally controversial. In Puerto Rico, the opposition has accused the government party (*Partido Nuevo Progresista*) of attempting to manipulate the agenda (Guelke, 2001, 241–242). In Singapore in 1962, almost a fourth of the voters cast an invalid vote as a protest

against the agenda. In the Slovenian referendum on the electoral system in 1996, there were three options. A people's initiative, sponsored by the Social Democrats, would have replaced the existing PR-system by a plurality runoff system. However, another parliamentary group responded to the initiative by proposing a modified PR alternative, while the Slovenian second chamber passed a resolution to call a referendum on a mixed-member system. Due to the divisive questions and lack of clarity, no proposal won a majority, although the runoff rule was the plurality winner with 44 % support. Two years later, the Constitutional Court issued a review in which it instructed the Slovenian Parliament to accept the runoff rule as the winner. Thus, the Court's view was that a plurality was sufficient, while the Parliament required an absolute majority. In the tumultuous situation, the Parliament failed to act (Nikolenyi, 2011, 615–616). In Setälä's work, Newfoundland's runoff referendum was presented as an example of an attempt to manipulate the alternatives (Setälä, 1999, 29).

3.4.3   The Swiss Practices

Switzerland is one of the very few countries in the world where the law explicitly provides means for *nation-wide* referenda with more than two options. Many referenda in Switzerland are based on popular initiatives. The government cannot change the questions voted on but it can meet a popular initiative with its own counterproposal, which typically contains some elements of the original initiative. The Swiss government has consciously used a divide-and-conquer strategy in agenda formation. Before 1987, a voter could vote either for the original initiative or for the counter-proposal, but not for both. If neither got an absolute majority, both the initiative and the counter-initiative were rejected, and the *status quo* maintained. Using this method, the government was able to divide the opposition and sometimes maintain the *status quo* even when an absolute majority was against it (Delley, 1978, 106–108; Kobach, 1993, 356; 1994, 104). Manipulation by adding divisive options was even easier than with the plurality rule. For example, in 1955 both an initiative concerning consumers' and lessees' protection and the counter-proposal failed, although their joint support was over 90 % of those who participated. In this case the *status quo* would probably have been an absolute loser. Example 3.15 may, again, be used to illustrate the situation. Let *b* be the initiative, *a* the counter-proposal and *c* the *status quo*. In the example, *c* wins although it is considered as the worst choice by a majority of voters.

The Swiss law was changed for the very reason that it invited agenda manipulation. Since 1987, the Swiss voters have had the right to vote "yes" *for both an initiative and its counter-proposal*.[49] Under this rule, it is possible that both an

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[49] The Swiss Constitution, Art 139 b: "Ils peuvent approuver les deux projects à la fois. Ils peuvent indiquer, en réponse à la question subsidiaire, le projet auquel ils donnent la preference au cas où les deux seraint acceptés."

initiative and its counterproposal are approved by more than 50 % of the voters. Thus, voters have also to answer to a supplementary question (*Stichfrage, question subsidiaire*): "should both projects be accepted, which one would you prefer to become law?" The proposal supported by the majority is chosen. Even those who reject both proposals are allowed to answer to the supplementary question. The same practice is used in the cantons of Bern, Zürich and Nidwalden.

Obviously, the pre-1987 method violated weak neutrality by favouring the *status quo*. Less obviously, the post-1987 rule (the so-called *Haab rule*) is also non-neutral. This can be seen by considering the familiar Condorcet paradox.

Example 3.16

33 voters	33 voters	33 voters
a	b	c
b	c	a
c	a	b

Assume that c is the *status quo* and a and b are an initiative and its counterproposal. All the options have exactly the same number of first, second and third places in voters' rankings. However, only the counterproposal b is able to beat the *status quo* in pairwise comparison. Thus, it is selected, although it loses to initiative a. Hence, the new rule is non-neutral because it is slightly biased *against* the *status quo*.

In an interesting case-study on a referendum in the canton of Bern, Bochsler (2010) shows that the problem appearing in Example 3.16 is not merely a theoretical possibility. In a referendum in Bern 2004 on a revision of the law on the salaries of state employees, there were three options. Under the status quo (SQ) there was an automatic yearly salary increase for all. The majority in the cantonal parliament (*Grosser Rat des Kantons Bern*), consisting of the right-wing parties, wanted to introduce a performance-based system (GR), while the people's initiative (*Volksvorschlag*), supported by the left-wing parties, was a compromise (VV) between the parliament's proposal and the status quo. The results of the referendum were the following:

GR (51.6 %) > SQ (48.4 %)
SQ (50.6 %) > VV (49.4 %)
VV (51.1 %) > GR (48.9 %)

Thus the collective preferences revealed in the referendum results were cyclical. Because of the non-neutral character of the rule, the proposal put forth by the parliament (GR) became the outcome, although it was beaten by the popular initiative (VV). Interestingly, Bochsler argues that the result was due to strategic manipulation. The issue could plausibly be conceived as one-dimensional, the popular initiative (VV) lying in the middle between the two extremes (GR and SQ). Nevertheless, the right-wing parties and the employers' organizations recommended the voters to express the preference ordering GR > SQ > VV, which seems to be incompatible with the parties' true preferences. Their presumed

aim was to utilize the non-neutral character of the voting rule by creating a cycle. If 1 % (about 2000 voters) of those who participated had expressed the preference VV > SQ instead of the opposite preference recommended by the Right, the VV-alternative would have been the outcome.

Nevertheless, from the majoritarian point of view the Haab rule is clearly better than its predecessor. Unlike the old rule, the Haab rule cannot choose an absolute loser. If all voters vote sincerely, and express their full preferences it chooses the Condorcet winner (if there is one) from a set of three options.

3.4.4 California

From the United States, we have several examples of state-wide referenda with more than two options. Usually the competing proposals (sometimes as many as four or five) are all popular initiatives, while the Swiss counter-proposals are always put forth by the government.[50] The most common rule used in the US referenda is that voters are allowed to endorse more than one competing initiative, but *not* an initiative and the *status quo*. If two incompatible initiatives receive more than 50 % support, the one with a larger majority is the winner.[51] There is no supplementary question. The rule described above works quite like the approval voting rule (Sect. 3.1.3), with one exception. While approval vote is neutral, the referendum rule is slightly biased against the *status quo*. The following example gives an illustration of the non-neutral nature of the rule.

Example 3.17

60 voters	40 voters
a	b
b	c
c	a

Let us compare the following two cases: *Case* (1): *a* and *b* are competing initiatives; *c* is the *status quo*. The majority of the 60 voters approve both *a* and *b*. Then, *b* is the winner (although not an absolute majority winner). *Case* (2): *a* and *c* are competing initiatives; *b* is the *status quo*. Therefore, the 60 voters are not allowed to express their second preference, and *a* is the winner, although the distribution of preferences is the same as in Case (1). The outcome depends on

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[50] Some of the US methods were discussed by Herbert Tingsten in his early study on the referendum institution. His work also contains perceptive observations about the strategic properties of the rules (Tingsten, 1923, 178–182).

[51] The Constitution of California Art 2. Sec 10(6) "If provisions of 2 or more measures approved at the same election conflict, those of the measure receiving the highest affirmative vote shall prevail." Cf. the Constitution of Michigan, Art II Sec 9.

the identity of the alternatives, not only on the distribution of preferences. Hence, the rule cannot be neutral.

Another consequence of the practice which allows the opponents but not the supporters of the *status quo* to vote for more than one proposal is that an absolute winner may lose. For if more than one of the competing initiatives receives over 50 % of the votes, the one with the largest majority support is chosen. If the opponents of the *status quo* endorse more than one proposal "for security's sake", a proposal regarded only as the second best by the majority of voters may win. This is shown by the following example:

Example 3.18

50 voters	10 voters	20 voters	20 voters
a	a	c	b
b	c	a	c
c	b	b	a

Although *a* is the absolute majority winner, *b* is the outcome if the 50 voters with the preference $a > b > c$ endorse both *a* and *b*. This property is shared by the approval voting. Under both rules the outcomes are highly dependent on the way in which the voters choose to express their lower preferences (Saari & van Newenhinzen, 1988).

Andrew Skalaban (1998) discusses a real life example of strategic voting in a Californian referendum. In 1990, the Californians voted on the legislators' term limits. There were three options: Proposition 131 placed 12-year term restrictions on all members of the State legislatures, while the competing Proposition 140 placed 6- and 8-year term restrictions on the members of the State Assembly and Senate respectively. The third option was the *status quo* with no term-restrictions. The opinion measurements show that the median (the Condorcet-winner), was close to Proposition 140: about 60 % of the voters supported term limits of 3–9 years. Because the preferences of the Californian voters were single-peaked—most of those who supported the more limiting Proposition 140 also considered the less strict Proposition 131 as the second-best—the situation was close to that depicted in Example 3.18. However, in the referendum most supporters of Proposition 140 voted *against* their second-best, Proposition 131. The former passed with 52 % of the votes, while the latter did not even come close to getting a majority. In this case, strategic voting produced, in Condorcetian terms, a better result than "straight" voting. But it should be noticed that while the strategy of voting against the second-best did help the Condorcet- winner in this particular case, it might also hurt a Condorcet-winner in some possible cases. If *all* voters choose a truncation strategy, voting only their most favoured alternatives, the non-neutral bias of the Californian system is switched *for* the *status quo*. If all the voters express only their first preferences, and if no single proposal is considered as the best by an absolute majority, the *status quo* is maintained even when it is a Condorcet loser. In such a case the system would work quite like the Swiss system before 1987.

3.4.5   Maine and Washington

In the state of Maine, the referendum rule is slightly more sophisticated.[52] At the
first stage, it works like the Swiss pre-1987 rule: it allows voters to vote either for
any initiative or against all initiatives. If all the initiatives together collect more than
a half of the votes but none of them alone has an absolute majority, a new round is
arranged between the plurality winner of the first round and the *status quo*.
However, the condition for arranging a second round is that the plurality winner
collects *at least a third* of all votes cast in the first round. The second round is
clearly an improvement on the Californian and the Swiss pre-1987 rules. Never-
theless, a bias for the *status quo* is inbuilt even in the Maine rule. Consider this case:

Example 3.19

32 voters	30 voters	38 voters
a	*b*	*c*
b	*a*	*b*
c	*c*	*a*

The outcome is again the absolute loser, *c*, for neither of the competing initia-
tives passes the one-third threshold. Like plurality rule and the Californian rule, the
Maine rule is subject manipulation by divisive proposals. It has a further defect,
illustrated in the following example:

Example 3.20

34 voters	20 voters	38 voters
a	*b*	*c*
c	*a*	*a*
b	*c*	*b*

In this case, proposal *a* just satisfies the one-third requirement. Thus, it enters
into the second round and wins. But suppose that 15 of those voters ranking *c* as
their favoured choice had cast their votes for *b* in the first ballot. Then *b* would have
entered into the second round instead of *a* and had lost against *c*. By voting against
their true preferences, these 15 voters could help their favoured alternative to
victory. In other words, the Maine rule shares a property common to all elimination
rules (for example, the runoff and alternative vote): it violates the monotonicity
requirement.

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[52] The Constitution of Maine, Art. IV Sec. 18.2. "When there are competing bills and neither
receives a majority of the votes given for or against both, the one receiving the most votes shall at
the next statewide election to be held not less than 60 days after the first vote thereon be submitted
by itself if it receives more than 1/3 of the votes given for and against both."

Yet another method to deal with several proposals is used in the State of Washington.[53] There, voters are asked first to express their preferences for or against a change, and then to express their first preference among the competing initiatives. Thus, those who rank the *status quo* as the best choice are also allowed to express their second preference. If the *status quo* does not get an absolute majority, the winner is the most popular initiative. From a majoritarian point of view, this rule seems to be an improvement: it would pick the Condorcet winner in all the cases discussed above, and it would never choose an absolute loser.

However, the Washington rule is non-neutral. It is slightly biased *against* the *status quo*, for it does not allow the expression of a second preference for it. This can be seen in the following example.

Example 3.21

30 voters	25 voters	45 voters
a	*b*	*c*
c	*c*	*b*
b	*a*	*a*

The Washington rule lumps together the votes for the competing initiatives *a* and *b* as "votes for change". The *status quo* option *c* is a Condorcet winner for it is the second best for the supporters of the competing initiatives. But their second preferences are not counted. Hence, initiative *b* wins. Notice that here *all* the other rules discussed would—because of their opposite bias—choose option *c*. [54]

3.4.6   An Example of a More Complex Agenda: New Zealand

The two referenda arranged in New Zealand on the electoral reform, in 1992 and 1993, give us a rare example of both the possibilities and the problems connected with the use of more complex voting procedures in direct democracy (see Bogdanor, 1997, 14–44; Levine & Roberts, 1993; Mackerras, 1994; Nagel, 1994; Vowles, 1995). In the first referendum two questions were submitted to the voters: first, whether they wanted to change the existing plurality system or not; second, which of the four options (the mixed-member proportional system, the single transferable vote or STV, the alternative vote, and the supplementary member system) they favoured. Voters were allowed to answer the second question even

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[53] The Constitution of Washington, Art. II Sec. 1. "When conflicting measures are submitted to the people the ballots shall be so printed that voter can express separately by making one cross (X) for each two preferences, first, as between either measure and neither, and secondly, as between one and the other. If the majority of those voting on the first issue is for neither, both fail (...). If a majority voting on the first issue is for either, then the measure receiving a majority of the votes on the second issue shall be law."

[54] Further information about the use of counter-initiatives in the USA can be found in Bowler et al. (1998), pp. 4, 99, 109–129.

if they answered "no" to the first question. So, in effect the supporters of the *status quo* had two votes. Because a large majority—85 % of those who voted—wanted a change, the government arranged a new referendum in which the winner of the first referendum (the mixed-member proportional system) was put against the *status quo* (the plurality system). The former won with 54 % of the votes. The results were as follows:

1992 referendum	
Part A	
Plurality maintained	15.3 % of votes
Change	84.7
Part B	
Supplementary member	5.5
STV	17.4
Alternative vote	6.6
Mixed-member	70.5
Turnout	55.2 % of the electorate
1993 referendum	
Plurality	46.1
Mixed-member	53.9
Turnout	85.2

The procedure used in New Zealand was an interesting hybrid. As compared with the simpler rules, it clearly had some merits. With five options and two rounds, it provided more choice for the voters and gave them an opportunity to express their preferences in a more detailed way. Most notably, it would always choose an absolute winner if one existed, and would never choose an absolute loser. In *all* the examples discussed above, the New Zealand rule would choose a Condorcet winner.

However, the New Zealand rule also had its defects. Like most referendum-rules operating with more than two choices, it was non-neutral. The supporters of the *status quo* had an opportunity to influence the selection of its challenger, while the *status quo* entered into the second round automatically. In this sense it worked like the parliamentary amendment method. It operated like the plurality runoff in the sense that a Condorcet winner could well drop off in the first round. Moreover, the New Zealand procedure violated (weak) monotonicity and, at least in principle, this made it vulnerable to strategic voting (Sect. 4.3.2). Because supporters of the *status quo* alternative were allowed to answer the second question in the first referendum, they could vote for the challenger they thought to be the least likely to command wide support among the reformists (Bogdanor, 1997, 142).

Several political scientists have questioned both the agenda and the procedure used in the New Zealand referendum. Among the alternatives, there were two truly proportional systems (the mixed-member proportional system and the single transferable vote system), as well as three non-proportional systems. Levine and Roberts (1993, 160) have argued that this could have split support for proportional representation and allowed another—but, in reality, less popular—option through to the second ballot. In other words, these commentators were worried about the

possibility that a Condorcet winner could well drop off in the first ballot. Some commentators saw the complexity of the referendum arrangement simply as an attempt by the National Party government to manipulate the agenda (Nagel, 1994, 525). According to Vowles (1995, 107–108) "the 1993 referendum was therefore to be held in a form significantly loaded against the [mixed-member proportional] option". Interestingly, these well-informed commentators took it for granted that the "real" issue was one-dimensional and dichotomous: proportional representation or no proportional representation. In contrast, one enthusiastic supporter of STV argued that "a contest between STV and [plurality rule] would have seen [plurality rule] as heavily defeated on the second round as it actually was on the first round" (Mackerras, 1994, 37). In this interpretation the winning mixed-member system rather than STV was seen as the "divisive" option.

3.4.7   Agenda Power in Direct and Representative Democracies

The following table summarizes my findings. I have taken only some well-known criteria into account, especially those related to the majoritarian theory of democracy. For the sake of comparison I have added two rules not used in referenda but extensively discussed in the social choice literature: approval and Borda. The last rule ("combined") is my own proposal; it is explained below.

Criteria	AW	AL	M	WN	C
Swiss (–1987)	1	0	1	0	0
The Haab rule	1	1	1	0	1
California	0	1	1	0	0
Maine	1	0	0	0	0
Washington	1	1	1	0	0
New Zealand	1	1	0	0	0
Plurality	1	0	1	1	0
Runoff	1	1	0	1	0
Approval	0	1	1	1	0
Borda	0	1	1	1	0
"Combined"	1	1	1	1	0

AW, absolute (first preference) winner chosen; AL, absolute loser (strong Borda paradox) avoided; M, weak monotonicity satisfied; WN, weak neutrality satisfied; C, Condorcet-criterion satisfied

A mechanical enumeration does not provide a sufficient justification for or against a decision-rule (Nurmi, 2012). Nevertheless, the results may be used as a basis for some speculative remarks. The most important aim of the various referendum methods is to preserve the supposed simplicity or transparency of direct democracy. This is obvious when we compare referendum methods to those used in electing representative assemblies; the latter (for example, the systems of

proportional representation) are sometimes *very* complex. This search for simplicity is related to what Michael Dummett (1984, 142) has called "the mystique of majorities". For those designing referendum rules it seems to be important that at least at *some* stage, in some counting of votes, the absolute majority criterion becomes relevant. This search for simplicity seriously limits the number of logically available methods. Simplicity is achieved by sacrificing neutrality and/or weak monotonicity. Another unintended consequence of this striving for simplicity is that the chosen rules are highly vulnerable to agenda manipulation. In all our examples, we could produce a different winner by deleting a non-winning initiative from the agendas. Of course, most voting rules are subject to agenda manipulation. However, the simplicity requirement makes agenda manipulation particularly easy, for it precludes the comparison of lower preferences.

The power over the agenda should be one of the central topics of the normative as well as the empirical theory of democratic government (see Barber, 1984, 181; Dahl, 1989, 112–114; Hyland, 1995, 58). As Benjamin Barber (1984, 181) says

> a people that does not set its own agenda, by means of talk and direct political exchange, not only relinquishes a vital power of government but also exposes its remaining powers of deliberation and decision to ongoing subversion. What counts as an "issue" or a "problem" and how such issues or problems are formulated may to a large extent predetermine what decisions are reached.

Representative democracy is often regarded as paternalistic. Barber (1984, 145) argues that representation "alienates political will at the cost of self-government and autonomy". In one sense, however, representative democracy may appear to be *less* paternalistic than referendum democracy. In a small group of full-time decision makers, votes can be taken as many times as needed. All alternatives that have some popular support may be discussed and voted on. Minorities or individual representatives have the right to make initiatives. Although agendas are often created exogenously, the representatives may have a power to change them. There are, of course, agenda-setting problems in representative legislatures. However, they create normative problems only if the agenda formation processes are systematically biased against some groups; and professional politicians are more likely to detect intended manipulative attempts or unintended ambiguities than ordinary citizens. We can at least say that in a representative democracy, full democratic control of agendas is a less utopian goal than in a direct mass democracy.

However, the lesson of the New Zealand example is that by using methods which allow more choices, agenda power in direct democracy may be decentralized and the agendas may become more complex. There are numerous unexamined possibilities which could be used to improve the referendum device. For example, any rule that takes the second preferences of *all* voters into account would choose a Condorcet-winning alternative in *all* the examples discussed above. If we do not want to stick to the majoritarian idea, we could allow voters to rank all the options according to their preferences, and then choose the Borda winner. A compromise would be to count the first preferences, and to apply the Borda criterion only if no absolute majority winner is found. This rule ("Combined" in Table) would satisfy

all the criteria of our table except the Condorcet criterion. It would not eliminate the possibility of agenda manipulation, but it might at least make it more difficult.

The unavoidable price of using more complex methods in referenda is, however, that the simplicity argument for direct democracy is not credible. If agendas are sufficiently complex and if the methods used in making decisions take other than first preferences into account, the general problems of social choice are bound to become visible. Thus, although the agenda in the New Zealand referendum was not very complex (two rounds, five options), the basic problems detected by the theory of social choice were seen as relevant. The nature of the agenda was a source of some controversy, and suspicions about conscious manipulation arose.

According to Budge (1993, 153: cf. Budge, 1996, 159) "the attempt to mobilize social choice theory against direct democracy seems to encounter the familiar pitfall of arguing against the possibility of democracy as such, rather than any particular form of it". This is true in the sense that the impossibility results of the social-choice theory constrain *all* methods of decision-making, in one way or in another. However, different methods are defective in different ways, and, from a democratic point of view, some defects are more serious than others. The fundamental normative consequence of the social choice results is *not* that "democracy is impossible", but that there are unavoidable trade-offs between different democratic desiderata. The problem of agenda power in direct democracy illustrates this. If we try to simplify the nature of democratic choice by reducing the number of choices, we deliver the power to those who do the reducing. If we allow more choices, the voting results may become controversial. Finally, if we employ more complex procedures in order to prevent ambiguous results, we lose the intuitive simplicity praised by Budge and others. Both Bogdanor (1997, 143) and Setälä (1999, 29) seem to argue that the intuitive simplicity of the standard yes-no referenda is one reason for their legitimacy. If my argument is right, this legitimacy is partly based on an illusion.

The lesson is *not* that the agenda problem should be interpreted as a decisive argument against the use of direct mechanisms. Rather, the conclusions are that the complexity of direct democracy should be openly recognized, and that direct democratic mechanisms should be conceived in the general context of interaction between the representatives and the people rather than as a separate, competing form of democracy. Arguments for the more extensive use of direct democratic mechanisms may be based on the working of the representative institutions. Referenda may, for example, increase the responsiveness and accountability of elected representatives, and bring their policies closer to the voter median. Simply the threat of a referendum may have the effect. Further, referenda may be used in choosing general principles, on which the more specific policies should be built, as in the recent constitutional referendum in Iceland. Finally, they may be used in solving deadlocks within representative institutions. What is common for these applications is that direct democratic mechanisms are not seen as approximations of the ideal of pure democracy, but as possible means to improve the performance of representative democracy evaluated by its own standards.

3.5   Another Perspective to Social Choices: Proportionality

In modern democracies, elections have two roles. In elections, people choose their particular representatives as well as participate in determining the composition of a parliament. The first role of elections may be interpreted in terms of the standard social choice theory: the paradigmatic application of the social choice models is the choice of one single office-holder from a limited set of candidates. The idea of *proportionality* is related to the second role of elections: proportionality refers to the relationship between the composition of an assembly and the preferences of the whole electorate. This idea is a product of the modern party-based democracy. Most works on social choice have less to say about proportional election mechanisms (partial exceptions are Dummett, 1997; Felsenthal, 1990; Sugden, 1981, while the work of McGann and his co-authors is a new breakthrough). Similarly, most advocates of PR-rules have paid no attention to the social choice literature. However, the earlier literature on proportionality does contain some interesting insights (Flodström, 1900; Hoag & Hallett, 1926). Riker (1961, 901) once claimed that the early advocates of proportional representation were not aware of the Condorcet Paradox. Riker was, however, at least partly mistaken. For example, when writing their classical treatise on proportional representation, C. G. Hoag and G. H. Hallett had already grasped most of the issues discussed in Sect. 3.2. They clearly understood the significance of the concept of a Condorcet-winner, although they did not use the term. Moreover, they recognized that the rules in actual use did not necessarily choose Condorcet-winners. They knew that these rules could be manipulated by strategic voting and were also aware of the fact that, in some situations, Condorcet-winners did not exist. They realized that such situations were especially vulnerable to strategic behaviour. Hoag and Hallett did not emphasize these anomalies, for their research-programme was different from that of the social-choice theorists. Their solution to the problems of democratic choice was not to find a better system for choosing *individual* candidates, but to find an optimal way to choose *assemblies*.

3.5.1   Proportional Representation Systems

By a "proportional representation (PR) system" we usually refer to rules which are designed to elect candidates in multiple-seat constituencies, and to allocate seats according to some formula related to the *relative support of parties or electoral groups*. Moreover, the *list proportional systems* are like the plurality rule (and unlike runoff-rules or STV) in the sense that voters are usually allowed to cast only one vote. Usually, "proportionality" refers to proportionality in respect with the distribution of voters' first preferences only.

While the PR-systems generally aim at fair representation among political groups, the first interest in proportionality was related to the fairness of

geographical representation. Thus, the PR-scheme generally known as the d'Hondt-system was first introduced by Thomas Jefferson in 1792 as a method of appor-tionment of the seats of the States in the US Congress, while the competing method known as Sainte-Laguë was invented by Daniel Webster in 1832 for the same purpose. Similarly, the largest remainder—method was originally invented by Alexander Hamilton as a method of allocating the Congress seats. Proportionality as an aim of an electoral system was first expressed during the French Revolution. The first proposals for a *list system* of proportional representation were put forth in the Continent by Joseph-Diaz Gergonne (in 1820), de Villièle (in 1839), and Victor Considérant (in 1834 and 1842), and in the United States by a Philadelphian activist Thomas Gilpin (in 1844). Considérant's writings had an influence on the propor-tional representation movement which spread from Switzerland to the other European countries. The details of the list methods were elaborated by Gilpin, the French parliamentarian Cantagrel (in 1858) and later by the Swiss professor, Victor d'Hondt (in 1885). List systems of proportional representation were first used in some Argentinean provinces (Buenos Aires 1873, Mendoza 1895). Before and after the First World War, several countries adopted some version of proportional representation—the first were Serbia (1899) Belgium (1895 in communal, 1899 in national elections), Finland (1906), Cuba (1906) and Sweden (1907). The adoption of proportional electoral systems was based on various theories of the nature of political representation—but in many countries it was also seen as a political concession to those groups who were afraid of losing their political influence because of general suffrage (see Carstairs, 1980). Only Denmark and Finland adopted proportional representation without passing through the interim phase of using some version of the "plurality-like" systems.

Sometimes the plurality, runoff, and alternative vote-systems are lumped together as "majoritarian systems", and contrasted with the systems of proportional representation. This distinction is misleading, for several reasons. Proportionality is, strictly speaking, not a monadic property of rules but a dyadic relation between *vote distribution* and *distribution of seats*. Thus, a "majoritarian" rule may, under some circumstances, produce very proportional results, while a rule normally classified as "proportional" may produce extremely disproportional results (An example of the former is the plurality rule in the US congressional elections). Sometimes the rules classified as "proportional" in the empirical literature on electoral systems are purportedly designed to give a decisive advantage to the largest party or parties. For designers of electoral systems proportionality is usually only one aim among many. Thus, it is difficult to agree with Nohlen (1969) that electoral systems should be classified according to their *purpose* as "majoritarian" and "proportional"; electoral systems may reflect several, sometimes mutually inconsistent purposes. Several factors may affect the proportionality of the total distribution of seats in an elected assembly, and the method of counting the votes is only one of them. Apart from that, the most important factor is the *number of seats* available in a constituency. *Ceteris paribus*, the more divisible is the object that has to be distributed, the more proportional the distribution can be. Money, land or time can be distributed more proportionally than, say, cows or political offices.

By increasing the number of seats we make representation more divisible—although it does not automatically follow that *power* is necessarily distributed in a more proportional way.

The flora of electoral systems is so rich that we can give only a very general classification. Indeed, among the approximately 70 countries which use some version of the list-PR systems in their parliamentary elections, there are hardly two countries with exactly similar electoral rules. Generally, there are two families of PR-methods. *Highest average* methods proceed by dividing the parties' voting shares by established divisors every time a seat is allocated to them. For example, the *d'Hondt* rule uses the sequence of divisors: 1, 2, 3, 4, ... Each party's vote share is first divided by the first divisor, 1, and the first seat goes to a party with the largest total. The share of that party is now divided by the second divisor, 2, and the result is compared with the shares of other parties. The party having the largest average gets the next seat. Suppose that it is the same party: then, its current average is divided by the third divisor 3. Assume now that another party has a larger average. Then, it gets the third seat and its vote total is divided by 2. This procedure is repeated until all the seats are allocated.

Different highest average methods use different series of divisors. The *Sainte-Laguë* method uses the series 1, 3, 5, ... , the *modified Sainte-Laguë* uses divisors 1.4, 3, 5... and the *Danish rule* has divisors 1, 4, 7, ... The divisor sequence is important for the result; generally, the more rapidly the divisors increase, the more rapidly the averages of large parties decrease to the level of the first average of the smaller parties. Hence, the d'Hondt system favours large parties, while the Danish method is more favourable to smaller parties. The unit-vote version of the plurality rule can be seen as a limiting case of the highest average methods: there is no increase in divisors (series 1, 1, 1 ...), and all the seats go to the largest party. Theoretically, there is an infinite number of the highest average methods, for we may choose whichever sequence of divisors we like. "Proportionality" is not, however, simply a property of the vote-counting rule. As the number of seats to be allocated approaches infinity, the seat allocations produced by different methods using increasing divisors become identical and almost perfectly proportional. *Ceteris paribus, the more seats there are to be divided, the less important are the differences between various PR-rules.* However, when the number of seats is *very* small, the differences between rules are, again, likely to be small. For example, in Chile, only two members are elected from every district. The first seat is given to the plurality-winning list (or alliance). The second seat is allotted to the same alliance only if its votes number twice the votes of the runner-up alliance. In effect, this system is a d'Hondt method applied to two-seat constituencies, although the results are likely to be very disproportional. Trivially, in one-seat constituencies all the PR-methods are reduced to the simple plurality rule. This shows how, from one point of view, the simple plurality and the PR-rules belong to the same family: both are positional voting rules and use only information about voters' first preferences.

With the *largest remainder* method one first calculates a *quota* based on the number of seats and of the votes cast. First, each party is awarded as many seats as it has full quotas. The unallocated seats (if there are any) go to those parties that have

largest remainders when the votes used up to fill the quota are deduced from their vote totals. The crucial element is the choice of the quota. The so-called *Hare* or *natural* quota is equal to the number of votes divided by number of seats (v/s). As with the highest average methods, there is an infinite number of possible largest remainder rules, for there is an infinite number of possible quotas. Some quotas in actual use are the *Droop (or Hagenbach-Bischoff) quota* ($v/(s+1)$), the *Imperiali quota* ($v/(s+2)$) and the *modified Imperiali* ($v/(s+3)$). Small quotas favour large parties, for they make more likely that all the seats are allocated at the first stage, and the remainders are not used. As with the divisor methods, when the number of seats increases, the differences between the different largest remainder methods disappear and the results converge towards those produced by the Hare quota (Gallagher, 1992, 484). If the sole aim of using a PR-system were to produce as proportional results as possible, one should make whole the country into a single constituency (as is the case in the Netherlands and in Israel). The choice of a rule would be a less important matter.[55] However, electoral rules are commonly thought to have other desiderata besides proportional representation of opinion groups. Geographical proportionality is one factor which tends to decrease political proportionality under any system (PR or non-PR), unless there are *compensation seats* allocated on the basis of the nationwide shares of votes.

3.5.2   Additional Complexities

PR systems tend to increase the number of parties represented in parliaments; hence they tend, *ceteris paribus*, to produce fragmented party systems. There are two means to counteract this tendency without totally rejecting the idea of proportionality, namely legally introduced *thresholds* and *bonus seats*. Bonus seats reward the largest party or parties with extra seats. Stronger versions ensure that there is always a majority winner, while weaker versions only strengthen the position of the largest party. The latter are currently used in Greece, Turkey and South Korea, but much stronger bonus systems were popular before the Second World War. In Mussolini's Italy, for example, the plurality-winning party received two-thirds of all the seats in Parliament, provided that it got at least 25 % of the total vote. Similarly, in Paraguay two-thirds of the seats went for the list with the highest vote and the rest was proportionally distributed, while in Romania (1926–1938) the plurality winning party received a half of the seats, provided that it got at least 40 % of all votes. In the Argentinean party primaries, the plurality-winning list takes two-thirds or three-fourths of all candidatures, and the rest goes to the runner-up list. In Italy (1993–2005) the rule guaranteed that a coalition obtaining a majority of votes received at least 55 % of the seats.

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[55] Benoit (2000) argues that the seat distribution rule tends to have a significant effect when the number of seat per constituency is between 5 and 15.

Mexico has experimented with more complex bonus systems. The 1988 electoral law established a "ceiling" as well as a "floor" for the representation of the winning party. If the plurality winning party won less than 51 % of the vote, it received an absolute majority in the Chamber of Deputies. If it obtained more than 70 % of the national vote, its representation was nevertheless restricted to 70 % of the seats. Between those limits, the seats were proportionally distributed. The electoral reform of 1991 reinforced the majoritarian component. According to the new law, if the winning party receives less than 35 % of the vote, the seats in the Chamber are proportionally allocated. If the winning party wins more than 35 but less than 60 % of the vote, it receives a majority plus a bonus of two additional seats for each percentage above 35 %. Between 60 and 70 %, the allocation is a proportional one. Similarly, Peruvian municipal elections are held under complex bonus rules. If one list wins a majority of votes, council seats are allocated by the d'Hondt system. If one list wins more than 20 but less than 50 %, it receives half plus one of the seats and the rest is allocated as above. If no list receives at least 20 % of the valid vote, a runoff is arranged between the top two lists, and the winner of the runoff wins half plus one of the seats. The Russian law is less complicated; it simply requires that if only one party is able to cross the 7 % electoral threshold, the next largest party is, nevertheless, entitled to have seats.

While the bonus-systems are purportedly non-proportional, they share the basic logic of the proportional systems in the sense that they operate in terms of party-preferences. The official justification of using bonus seats is that they guarantee the existence of a working majority in parliament (while sometimes limiting the size of this majority). But, quite obviously, they have often been instruments for the largest parties to reinforce their power. Typically, strong bonus systems have been used in countries with dubious democratic credentials. *Thresholds* are less problematic in this respect, although they are often introduced for specific political purposes (In Germany, for example, the problem has been to find a threshold which would keep the Neo-Nazis out and let the Liberal Democrats in). Even if we do not consider exact proportionality as a norm, the problem common for bonus seats and thresholds is that they are determined in an arbitrary way. Thus, Greece had, in the 1958 elections, a 25 % threshold for parties and a 35 % threshold for alliances of two parties, while in the Netherlands the current threshold is only 0.67 %. A high threshold (about 7 % or more) is likely to undo the ideal of proportionality, while a very low threshold is without effect. Because the effects of thresholds (and of bonus rules) are discontinuous, high thresholds may have dramatic effects. The number of "wasted" votes may be higher than in many single-member systems. Thus, in the elections of the Russian *Duma* in 1995 and of the Turkish Parliament in 2002, about 45 % of votes were wasted. Moreover, the effect of threshold is not only that it leaves some parties without representation: it inevitably affects on the way in which power is distributed among those parties which *are* represented. Thus, the fate of the Social Democratic governments in Sweden has often depended on the small Communist Party's ability to cross the 4 % threshold.

Twenty-two countries use *mixed systems* which combine proportional election methods with plurality or runoff rules. One of the first countries experimenting with

a mixed system was Denmark (1915–1920); the best-known case is certainly Germany after 1949. The term "mixed system" is, as such, uninformative, for proportional and non-proportional principles can be combined in different ways and for different purposes. The two principles may *coexist* so that some voters vote under one formula and others under another (existing systems based on this principle are those used in choosing the French Senate and the Parliaments of Niger and Panama). They can be *superposited* so that every voter is a member of two districts and has two votes (for example in Japan, Mexico, Russia, South Korea, Taiwan and Ukraine); they can be *fused* so that within every district some seats are allocated according to a non-PR and some according to a PR-rule (as in the French municipal elections).

Further, the relation between two principles can be *conditional* so that one formula is used first and the second comes into play only if the outcome of the first formula does not meet a required condition. In France between 1919 and 1927, the rule was the following: if one list had at least half of the votes in a constituency, it got all the seats; otherwise they were proportionally distributed. The relation between the formulae can also be *unconditional* so that both formulae are invariably used, but the application of the second depends on the outcomes of the first. For example, a certain number of PR seats are distributed so as to correct the distortions of a non-PR rule, as is done in Germany, Italy, New Zealand, Philippines and in the local parliaments of Scotland, Wales, and the German States. David M. Farrell (2001, ch. 5) has introduced another, less technical and politically more relevant classification of the mixed systems. Some countries—Bolivia, Germany, New Zealand and Venezuela, for example—use the PR element to compensate for the disproportionality of the distribution of constituency seats. Farrell calls these "*mixed member proportional*" systems. In some systems—for example in those of Hungary, Italy, Japan, Mexico, Russia, South Korea, Taiwan and Ukraine—the proportional and non-proportional components operate separately and in a parallel way; these are called "*mixed member majoritarian*" systems.[56]

Most mixed systems combine proportional representation with the plurality rule, but Georgia, Lithuania and Macedonia combine it with a runoff rule and Senegal with the unit rule. In mixed systems, the number of seats filled by PR varies from 15 % (South Korea) to 64 % (Georgia). Again, we see that the number of possible systems must be enormous, if all logical combinations are taken into account. Moreover, we see that the standard classifications of different rules—both those used in the social choice literature and those used in the empirical studies on democracies—are often relatively uninformative, for they are usually based on a single property of rules.

PR-rules are means for allocating seats for parties, but it need not to mean that voters have no influence over the choice of individual representatives. In the *closed list systems*, parties determine candidates as well as the order in which they are elected. Voters simply have to choose between different lists. Most countries using

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[56] On various mixed systems, see Massicotte and Blais (1999), Shugart and Wattenberg (2001).

closed lists, however, provide some means for voters to influence the order in which the candidates are elected. Voters may, for example, have separate preference votes for that purpose. The preference votes may be aggregated in different ways. In Luxemburg and Switzerland, the cumulative vote is used in intra-party preferential voting; in Italy (before 1993), the rule used was a version of approval voting; in Austria, a version of the Borda count is used (Katz, 1986). However, even with intra-party preferential vote, the closed-list systems violate the two properties defined in Sect. 2.2.1, neutrality and strong monotonicity. More exactly, the rules are non-neutral between *candidates*, for the order determined by the party holds unless sufficiently many preference votes are cast for candidates having a lower position in the ordering (Katz, 1986, 94). *Free list systems* allow *panachage* or cross-voting: voters may give preference votes for candidates on several lists. In the *open list system* (for example in Finland), voters vote only for candidates, but the candidate votes are pooled at the party level. The total number of votes given for the candidates on a party list determines the party's share of seats, and those candidates receiving greatest numbers of votes are elected on the list.

These rules ensure that most popular candidates on the most popular lists are elected. But some unelected candidates are still likely to be more popular than some elected candidates, if the latter are on more popular lists. Some mixed systems separate the two functions of elections. One group of representatives is elected directly (for example by plurality), while others are elected from the party list in order to ensure proportionality. These systems are bound to compromise either the proportionality or the candidate-popularity requirement to some degree. There is an unavoidable trade-off. *No electoral rule can guarantee fairness to groups and to candidates at the same time*. However, the modern democracy is thoroughly based on party-groups. It may be argued that fairness to party-groups is a more important feature of electoral system than fairness to individual candidates.

3.5.3   Proportionality and the Theories of Representation

Obviously, proportionality does not make sense when the task is to single out just one alternative among the many, as is the case in the standard applications of the theory of social choice. But, quite often, real political choices are not like that. For example, the task of a decision-making committee may be to approve a number of separate projects. In such contexts, the use of majoritarian decision-making rules may often lead to outcomes which may violate our intuitive notions of fairness. Consider the following example. There are six alternative projects {a,b,c,d,e,f} on the agenda. A committee may approve only three of them. The committee consists of two voter groups with opposite preferences:

Example 3.22

6 voters	3 voters
a	d
b	e
c	f
f	c
e	b
d	a

A purely majoritarian rule (unlimited multiple vote or separate majority ballots on each project) selects all the favourites of the six left-most voters: *a, b* and *c*. So does the Borda rule, although it is often supposed to protect minority interests more effectively than majoritarian procedures. Under the approval procedure, if the six voters approve their three most-favoured projects, the result is the same. However, it can be argued that the result {*a,b,d*} is, in some sense, a more just and even more democratic result; a minority of one-third is proportionally so large that it should be entitled to get one project out of three. The idea of *proportional fairness* is at least as old and deep-rooted as the idea that majorities should have the final say. In the example, fairness seems to imply that the minority is entitled to choose one project out of three—it can again be seen as one possible way of interpreting the idea of a reasonable compromise between competing claims. But the requirement can also be seen as an application of the Aristotelian notion of proportional justice. In representative contexts, the requirement of pure proportionality can be expressed in terms of a simple formula: *seats of group X/total seats = votes of group X/total votes*. Because the number of seats to be shared is usually much smaller than the number of votes cast, any real-life proportional system can be only a rough approximation of pure proportionality. Various systems of proportional representation can be seen as attempts to approximate the idea of proportional fairness. Proportional representation is usually related to parties, but it can be applied to geographical communities (for example, to the member states of a federation), or to ethnic groups. Usually, fairness to parties is combined with other requirements, for example, with fairness to geographical communities or to different social groups. These requirements pull in different directions: a system which ensures a fair share of representation to all geographical communities is likely to produce disproportional results in respect of parties.

Before examining the systematic properties of PR-rules, it may be instructive to discuss briefly on one influential argument *against* the idea of electoral proportionality. According to the argument put forth by important theorists of political representation such as Hanna Pitkin (1967) and F. R. Ankersmit (1996, 2002) the proportionality requirement is based on a mistaken view of the nature of representation. Their argument against proportional representation runs like this. The notion of political representation is a sub-species of the general concept of representation. Hence, political representation could and should be analysed together with artistic, linguistic, statistical *etc*. forms of "representation". The old pre-modern notion of "representation" was based on the idea of *similarity* and *resemblance*. So is proportional representation. The criticized argument *for* proportionality is this: in

order to be representative, parliaments and other bodies representing large publics should be "portraits" and "miniatures" of the represented because similarity is supposed to be embodied in the very concept of representation. However, according to Pitkin and Ankersmit, this view of the general nature of the representation relation is limited and outmoded. We have to recognize that in any particular representation relation, there is a necessary gap between the represented object and the representative object. Any object is similar and dissimilar to another object in innumerable ways. A representing object, say, a painting, is necessarily "unlike" the represented object, say, a person (A painting is two-dimensional; it is not alive, *etc*.). An impressionistic, highly stylized portrait need not be a less good representation of the model than a photograph. The representation relation is always *conventional*, not natural. All this is also true about political representation. Consider an assembly with 200 members, representing four million voters. Whatever the composition of the assembly, it is bound to be "unrepresentative". The voters have innumerable properties; it is impossible that the assembly members would share *all* of them in the right proportions. Hence, because an elected body can never be a replica of the public, the supposed "resemblance" between the composition of the body and the public is not an adequate test of the representative nature of that body. We cannot determine the representativeness of the former by simply comparing it to the latter.

This argument against proportional representation is, I think, based on several misunderstandings. First, I do not think that the undeniable etymological connection between various forms of "representation" is sufficient to justify the claim that these notions should be analysed together. To take an analogy, there are several terms in the Indo-European languages derived from the Latin word *status*. From this, it does not follow that an adequate analysis of the concept of "state" should cover both "physical states" and "federal states". Similarly, it may be argued that the political and artistic etc. notions of "representation" develop in so many different directions that it would be useless to analyse them as instances of one general notion.[57] Second, I am not convinced that the argument based on the "portrait" metaphor is either historically important or conceptually necessary in justifying the proportionality requirement. Most advocates of proportional representation have appealed to other considerations, too.[58]

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[57] In many languages, there is an alternative verb for political representation: *vertreten* in German, *företräda* in Swedish, *edustaa* in Finnish. For those who think that etymology may be philosophically informative, these expressions should give some food for thought. Unlike "representation", these verbs cannot be related to the mysterious "virtual presence of those who are physically absent". Rather, the connotation is that the representative *walks or stands before* those who are represented and who, therefore, must be physically present. My intention is not, however, to build a new theory of representation on this observation but only to illustrate the limits of "linguistic" arguments based on the idiosyncrasies of particular languages.

[58] For example, both Count de Mirabeau and John Adams spoke about the legislature as a "portrait" of the nation—but neither of them was referring to any scheme of proportional representation in the modern sense of the word.

Third, even if the metaphor had its alleged importance, critics such as Ankersmit or Pitkin miss a fundamental aspect of it. What is essential in the portrait metaphor is *not* that a representative body should be as "faithful" portrait as possible, replicating all properties of the electorate in the right proportions. The point is rather that *the voters themselves* are able to choose which of their shared properties are represented. This can be illustrated by comparing PR-rules to the two other possible ways of acquiring "proportional" distributions: *pre-determined quotas* and *random sampling*. Under a PR electoral rule, the citizens are free to vote according to their confessions, ethnic backgrounds, class divisions, *etc*, but, unlike in a system based on pre-determined quotas, they are not *forced* to reproduce any particular differences. In contrast to the case of a representative statistical sample, all the differences are not *automatically* reproduced. Only those properties of the people which the people themselves see as important are "represented" in a proportionally elected representative body. A system based on pre-determined quotas is like a portrait (or a caricature) drawn by somebody else, while a statistical sampling is like a photographic copy. What is important for the proponents of proportional representation is not that a body elected by a PR-rule is an "accurate" portrait of the electorate, but that the body is, in a sense, a *self-portrait*.

3.5.4   Some Formal Properties of Proportional Rules

If, contrary to the linguistic argument, proportional representation is not necessarily based on a "microcosmic" or "mimetic" conception of representation, on which principles, then, is it based? One often-discussed aspect of the proportionality requirement is that it seems to provide a solution to one traditional problem of democracy, the problem of the fair treatment of permanent minority groups. This defence of proportionality is—unlike the defences of the majority principles discussed in the earlier sections of this work—based on non-individualistic premises: voter groups rather than individual voters are seen as relevant.[59]

While the arguments put forth in the literature on proportional representation are usually of pragmatic and intuitive nature, at least some authors have tried to

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[59] Both Jones (1983) and Brighouse and Fleurbaey (2008) contrast 'fair distribution' or 'the principle of proportionality' to the majority principle and see the former as an alternative to the latter. However, they fail to pay sufficient attention to the necessary presuppositions of their alternative schemes. For example, Brighouse and Fleurbayeu (ibid., 1–2) argue that "power should be distributed in proportion to people's stakes in the decision under consideration. Stakes, here, measure how people's interests are affected by the options available in the decision (...)". They admit that interests cannot be treated in a neutral way, but "should be evaluated in connection with a conception of social justice". In order to distribute the power in an appropriate way, we should, then, first find out who are affected, what are their interests, and what would be a just way to treat those interests. Similarly, Jones's scheme presupposes that we can count the number of 'issues', identify the winners and losers in each issue, and assess the relative importance of wins and losses to each group.

develop systematic arguments for the proportionality requirement. Eliora van der Hout and Anthony J. McGann (2004) derive the proportionality requirement from a more fundamental principle of political equality. This is interesting for it is often argued (for example, by Beitz, 1983, 72) that the requirement of procedural political equality is as such neutral in respect with electoral rules. Moreover, van der Hout and McGann stress that their principle of political equality is an individualistic one: it is based on the requirement of the equal treatment of individual voters rather than of groups. Equality is analysed as a combination of two properties similar to those used in the derivation of May's Theorem (Sect. 2.2.1). (i) *Anonymity* requires that permutations of voters do not affect the seat-shares of parties. (ii) *Neutrality* requires that the identity of the parties does not affect the seat allocation. Moreover, there should be some systematic connection between votes and seats. (iii) *Non-negative responsiveness* (a conceptual relative of the weak monotonicity requirement) requires that if a party wins more votes and everything else remains equal, the party does not lose seats. Together, requirements (i)–(iii) imply the *weak plurality-ranking* between the parties: If party x wins more votes than party y, x has to receive a greater or equal seat-share to party y. A stronger version of the responsiveness (iii′) requires that if a party increases its share of votes, its share of seats must also increase. Requirements (i), (ii) and (iii′) imply the corresponding *strong* plurality ranking: if x has more votes than y, it ought to have more seats.[60]

   The connection between properties (i)–(iii) and the plurality-ranking is straightforward. From anonymity (i) and neutrality (ii) it follows that if parties x and y have the same number of votes, they must have the same number of seats. If, say, y has more seats, than either some votes count for more than others (*contra* (i)) or the seat allocation is biased against x (*contra* (ii)). If x then increases its votes share, it has to gain more seats or at least not to lose any (this follows directly from (iii′) or (iii)). This establishes the plurality ranking of the parties. Van der Hout and McGann derive the proportionality principle by defining analogous requirements for *coalitions* of parties. An example may illustrate this. Suppose that party x receives 50 % of votes and 70 % of the seats, while parties y and z both receive 25 % of votes and 15 % of seats. The ranking of individual parties ($x > y = z$) is compatible with the plurality-ranking, but the coalition of y and z gets fewer seats than its complement coalition $\{x\}$, thus violating either requirement (i) or requirement (ii) in respect to coalitions. Only a purely proportional allocation of seats satisfies all the requirements in respect to both individual parties and to coalitions. An alternative route to the same conclusion would be to replace the non-negative responsiveness condition (iii) by a requirement analogous to Arrow's independence requirement

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[60] As we saw, attempts to constrain and modify the seat allocation by bonus seats, thresholds, and mixed rules may violate responsiveness conditions. Due to such additional devices, parties may lose seats by increasing their share of the votes, and win some seats by losing votes. Anonymity is violated by all systems based on separate constituencies; the compound majority paradoxes discussed in Sect. 2.2.3 provide some simple examples. Neutrality, however, is respected by most electoral systems.

(Sect. 4.1.1): the number of the seats allocated to a party should depend only on its own electoral support, not on the way in which the rest of the votes are distributed among the other parties.[61] The latter requirement is intuitively appealing, for the distribution of the remaining votes has nothing to do with a party's own performance. With more than two parties, it implies the purely proportional formula (Luce & Raiffa, 1957, 362–363). These characterizations show how proportional representation and the majority (or Condorcet) criterion are both supported by similar intuitions about equal treatment in vote-counting situations.

The idea of a "purely proportional allocation" is obviously an idealization, for it cannot be satisfied, except accidentally, unless there are as many seats to be allocated as there are voters! However, when the number of seats in a constituency increases—in effect, the object to be divided becomes more and more divisible—all proportional list systems converge towards the perfectly proportional division. At the same time, they come closer and closer to the ideal of anonymity (i). We have seen that when elections take place in single-member constituencies, the impact of a vote may be depend on the constituency, thus violating the voter anonymity (consider, again, the impact of few thousand votes given in Florida 2000!). However, when the number of seats per constituency increases, the constituency borders matter less and less. In other words, the more proportional the system is, the less there are opportunities for gerrymandering.[62] Although no electoral rule satisfies the requirements of the strong plurality ranking property, (or, consequently, of exact proportionality) PR rules may well be designed so that they do satisfy some weaker requirements. Highest average methods like that of d'Hondt respect the responsiveness requirement (iii). As contrast, the largest remainders methods permit situations in which a party may grow lager relative to another party and yet loses a seat to it, or in which the arrival of a new party causes switches between other parties for no apparent reason (Gallagher, 1992, 491). Similarly, mixed systems are often likely to violate the responsiveness requirement. For example, one practical consequence of the Peruvian mixed system (see Sect. 3.5.2) is that a party may well receive more seats by winning only a plurality or by winning the runoff than by winning an absolute majority of votes with a narrow margin. Both the old and the new Mexican systems require that the seat allocation between the critical limits be very proportional; otherwise a party might gain more seats by *not*

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[61] McGann (2006, 24) argues that independence is not a quality that we should require of seat allocation rules. However, his notion of "binary independence" is defined in terms of rankings, not in terms of seat allocation. Suppose that parties *a* and *b* have an equal number of votes and seats. Then, a third party, *c*, gains some votes and seats at the expense of party *b*. This change would necessarily affect the relative positions of *a* and *b* in the *ranking of parties*, violating McGann's version of independence. In this sense, "independence" is certainly not a desirable property. In another sense, however, independence is violated only if the vote distribution between *b* and *c* affects *a*'s *absolute share of seats*. This is likely to happen in PR-systems which favour large parties. This latter version of "independence" is intuitively more plausible.

[62] Gerrymandering is the most drastic way of violating van der Hout's and McGann's anonymity condition (i). It is also an important aspect of the Locke problem (Sect. 3.1.6). While districting is usually an important issue in the SMD-systems, it is much less salient in PR-systems.

passing the limit of, say 60 %. Similar non-monotonicity problems have been detected in the German, Welsh and Hungarian electoral systems which all belong to the mixed variant (Tasnádi, 2008).

Single-member systems such as the plurality, runoff, and alternative vote rules violate the requirement (iii); they may produce unresponsive results in the sense that a party may gain more seats even when its relative share of votes decreases. They may even produce "spurious majorities": a party may gain a majority of seats without being a plurality winner. *Ceteris paribus*, these systems violate the requirements put forth by van der Hout and McGann far more often and more dramatically than the standard PR-rules. More generally: no rule that operates only in terms of *candidate preferences* can ensure that these requirements are even approximately satisfied. These observations show how the justificatory logic of proportional representation differs from that of the plurality or runoff systems. Plurality and runoff are seen as more or less fair methods to elect individual candidate. In a PR-system the fate of an individual candidate depends largely on the fate of the group he represents; in the plurality and runoff-systems it is the other way round. This reflects the historical fact that rules such as plurality and plurality runoff precede the modern party democracy, while proportional list systems were produced by it. Thus, we have two, potentially conflicting desiderata, related to the two roles of elections. In a democracy, we want to choose the most popular candidates and, at the same time, to ensure that the composition of assemblies reflects the popular opinion. If voters vote only for candidates, the entire composition is likely to diverge from the popular opinion, for some votes are "wasted" on candidates who are not elected or on candidates who receive a vote surplus which does not benefit the opinion group they stand for.

In practice, rules that allow the expression of lower preferences tend to produce fairly proportional results, if there are enough seats in a constituency to be shared, and if voter groups are able to coordinate their strategies. STV—often regarded as an ideally proportional system—leads to exactly proportional results if and only if voters belonging to a group prefer all the candidates of their group over any of the candidates of the other groups, and distribute their first-preference votes evenly between them. This condition is not always satisfied. A candidate or a party with relatively few first preference supporters may fare better than one with more first preference support but less ability to attract lower preferences from other voters groups (Sykes, 1990, 37–47). Similarly, cumulative voting may produce proportional results only if voters use appropriate cumulating-strategies. In Example 3.22, if both groups distribute their votes evenly between their three favourites, the majority takes all; if the minority cumulates its votes for its two topmost favourites, the outcome may even be {a,d,e}. More generally, in multi-member constituencies, all candidate-based rules tend to favour well-disciplined groups who are able to co-ordinate their votes. This reinforces the van der Hout-McGann argument that list systems of proportional representation are more egalitarian.

3.5.5   A Note STV and Monotonicity

Monotonicity or responsiveness come in two forms: the strong and the weak.[63] When there are three or more candidates, most voting rules fail to satisfy the *strong* monotonicity requirement. The reason for this is that they do not respond to changes of lower preferences.[64] For the same reason, no two-stage system is strongly monotonic. By contrast, *weak* monotonicity (or non-negative responsiveness) is a "technical" rather than a "moral" requirement. But although weak monotonicity enjoys wide support among theorists of democracy, it should be noticed that some commonly-used election rules are not even weakly monotonic. For example, the so-called single transferable vote (STV, or Hare's rule, see Sect. 3.1.4) used in the Republic of Ireland, in Malta and in the elections of the Australian Upper House, is not weakly monotonic, and is sometimes heavily criticized for that reason (Doron & Kronick, 1977; Dummett, 1997; Riker, 1982). This property of STV can be illustrated by the following example. Suppose that there are 100 voters with the task of electing one candidate to an office by using STV (Because there is only one seat to be filled, the rule used is actually the version called the alternative vote, but the logic is the same). There are three candidates, a, b and c. In this set of alternatives, the preferences of the voters are distributed as follows:

Example 3.23

34 voters	35 voters	31 voters
a	b	c
c	c	b
b	a	a

According to the rules of STV, c has to be eliminated from the contest, and 31 votes are transferred to b, who now becomes the winner. Now, suppose that four of those 34 voters having the preference-ordering of $a > c > b$ change their mind, and express an ordering $b > a > c$. Then, a will be eliminated instead of c, and 30 votes are transferred to c, who is the winner now. Because of non-monotonicity, the *additional support* for b caused her defeat. As Riker says, weak monotonicity is "simply a straightforward matter of making the voting system do what it is supposed to do" (Riker, 1982, 51). From this, one could infer that once the non-monotonic nature of a voting system is recognized, no one would be willing to defend it on ethical grounds (see, however, Coleman, 1989, 202–207).

Nevertheless, STV has been the rule generally favoured among the electoral reformers in the English-speaking countries since the times of John Stuart Mill (Hoag & Hallett, 1926; Lakeman & Lambert, 1964; Reilly, 2001). While the

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[63] To be more exact, there is a whole family of different monotonicity requirements. See McManus (1983) or Laruelle and Valenciano (2011).

[64] The most important exception of this is the Borda count which registers all preferences, and is therefore strongly monotonic.

technical notion of monotonicity is of a recent origin, the theoretical possibility that STV can produce "perverse" responses was recognized by some of its early proponents such as Hoag and Hallett (1926). They were undisturbed by this observation, because they regarded actual violations of monotonicity as empirically unlikely—a judgment shared by the contemporary advocates of STV. Bradley (1995) claims that not a single instance of monotonicity violation can be found in the 22-year-long history of the use of STV in Northern Ireland. Surely, if such empirical judgments are correct, they must have *some* relevance.

While most of the defenders of STV see the non-monotonicity of their favourite rule as insignificant, Jonathan Riley (1988, 316–321) admits the relevance of the problem, but thinks that the price is worth of paying:

> Liberal utilitarianism deliberately seeks to design a non-monotonic system of representation in order to promote the ability of minority groups to elect representatives in proportion to their numbers. That is, rather than necessarily responding positively (or non-negatively) to changes in voters' preferences over candidates, a liberal utilitarian system of representation is prepared to respond negatively if this would enhance the ability of minority groups to have a proportionate influence on deliberations by elected legislators. (Riley, 1988, 316)

Riley emphasizes that monotonicity can be sacrificed only if this enhances proportional representation, and that *legislative* decisions should be made by using a monotonic (majority) rule (p. 320). His basic argument is this: May's conditions—anonymity, neutrality and strong monotonicity—*are* all conceptually necessary parts of political equality. For practical reasons, however, we have to replace direct majority rule by some two-stage representative decision-making process in which we first elect representatives under some rule and then let them make the policy decisions by using some—possibly the same—rule. The two-stage majority rule is the only two-stage rule that satisfies political equality (defined in terms of May's conditions) at *each* stage, yet, the *overall process* violates political equality. The paradoxical result is due to the double-counting problems discussed above. Instead of preserving political equality at the level of both stages, we should, according to Riley, sacrifice it at the election level to make the overall process as egalitarian as possible. In a multi-candidate setting, the STV rule produces an assembly in which different opinion groups are represented. True, it violates May's conditions because it is not even weakly monotonic; but we saw that in a representative system, *strong* monotonicity has to be sacrificed in any case. In a wider context, STV can be defended against its critics (Riley, 1988, 316; 1990).

Riley argues, quite correctly, that any electoral rule should be evaluated as a part of the overall process. However, we should realize that a two-stage majority process violates only the strong form of monotonicity, but that STV violates *weak* monotonicity, too. While very few rules satisfy the strong form, there are several which satisfy the weak one. If some form of monotonicity is, as Riley admits, a part of our conception of democratic equality, the fact that something has to be sacrificed does not automatically point towards STV. Riley's specific reason to recommend STV is that it ensures the representation of different opinion groups. However, as we have seen, there are other electoral rules—for example the list-systems of proportional representation—that are able to do the same thing while respecting the requirement

of weak monotonicity. The defenders of STV need an additional premise. For example, STV may be superior to the list systems of proportional representation, because it takes other than voters' first preferences into account. However, so does the Borda count which is strongly monotonic. Ultimately, the relevance of various monotonicity conditions can be resolved only in the context of a more general theory of representative democracy.

3.5.6   Condorcet, Borda, and Proportionality

The two traditional (not necessarily incompatible) political principles of representation are the *mandate principle* and the principle of *accountability*. According to the mandate principle, people empower their representatives in elections to execute a particular policy or policies. According to the accountability principle, people evaluate in elections the past performance of elected officials. *Both principles presuppose, inter alia, that elections are, in some sense, a reliable expression of the "will of the people"*.

When a single official is elected, the will of the people is traditionally be equated with the will of the absolute majority of voters. However, as we have seen, the absolute majority criterion is not always decisive. The most plausible interpretations of the "will of the people" in such situations are the plurality, Condorcet, and Borda criteria. These criteria express three possible forms of correspondence between the popular will and a chosen outcome. When several representatives are elected from separate constituencies the compound majority paradoxes discussed in Sect. 2.2.3 bring in an additional complication: the majority of representatives elected from different constituencies need not represent the majority of all voters. Still a further complication is added when the representatives, in their turn, choose policies or a government. There are, then, at least four relevant relations of correspondence in parliamentary systems: the relationship between voters' opinions and the choice of individual representatives, the relationship between voters' opinions and the composition of the parliament, the relationship between the political composition of the parliament and the choice of the government, and finally the relationship between voters' opinions and the composition of the government (and the policies adopted by it). The question about the proper correspondence between preferences and the outcomes may be presented at any level, and all the three competing criteria of democratic choice (plurality, Condorcet, and Borda) may be considered as potentially relevant.

If the Condorcetian interpretation of majoritarianism is accepted, the proportionality principle could, perhaps, be criticized from a different angle. In one sense, the list-PR systems are still versions of the plurality rule. In PR-systems, the seats in assemblies are, as in the first-past-the post systems, and unlike in runoff and STV-systems, allocated according to the voters' first preferences only. But why "proportionality" should necessarily be defined as a relation between the allocation of seats and voters' *first* preferences? An alternative to this practice would be to take

the lower preferences into account in the seat allocation (Bonner, 1986, 92–93). The resulting distribution of seats would reflect not only the first-preference support of the parties, but their overall position in the voters' preferences. It may, for example, be argued that because of unpopularity among voters in general, an extremist party should not be entitled to have as many representatives as parties which are generally more acceptable to most voters (Dummett, 1992, 106; 1997, 161–167). There is at least one such system in actual use: the single transferable vote-system (STV) does, up to a point, take some lower preferences into account. Other proposed rules like the Borda rule and the various extensions of the Condorcet-criterion go farther in this direction. One practical consequence of this is that extremist candidates would have only a small chance of becoming winners (the Condorcet criterion is even more "centrist" than the Borda criterion). Although the plurality rule is sometimes said to discourage extremists, *both* the plurality rule *and* proportional representation are more favourable to extremist parties than the alternative rules because they pay attention only to voters' first preferences. Moreover, proportional rules do not guarantee that a party which is the Condorcet (or Borda) winner receives any seats at all (van Deemen, 1993). Suppose that there are 100 seats to be distributed between five parties in an exactly proportional way, and the preferences of the voters are as follows:

Example 3.24

35 % of voters	30 % of voters	25 % of voters	10 % of voters
a	b	c	d
e	e	e	e
d	d	d	c
c	c	b	b
b	a	a	a

For van Deemen (1993, 2013) Example 3.24 constitutes a "paradox". Party *e* is the Condorcet winner for it would win all the pairwise contests between the parties, but it receives no seats at all, while party *a*, the absolute loser, receives the largest number of seats. Indeed, the plurality-ranking of the parties $(a > b > c > d > e)$ *reverses* the ranking based on pairwise comparisons (or on Borda). These phenomena are likely to appear in real-life PR-elections, as shown by van Deemen and Vergunst (1998), Härd (1999), and Kurrild-Klitgaard (2005). Any attempt to strengthen the Condorcetian (or, alternatively, the Borda) aspects of elections would necessarily diminish their first-preference proportionality. There seems to be a conflict between the proportional and the majoritarian/Condorcetian philosophies.

How disturbing is the result? Most defenders of proportional representation would probably be unmoved by this alleged "paradox". The "paradox" simply illustrates the rather obvious fact that the plurality-ranking of parties is in no way connected to their pairwise majority ranking. But nor should it be. It is mistake to interpret the share of the seats of the parties in terms of an Arrow-type social

welfare ordering or social choice function.[65] Rather, the allocation of the seats in the parliament is only the *first step* in the process of making choices for the entire society; a process which also includes the choice of the government and the acceptance of the policies proposed by it. Although party *a* has the largest share of seats in Example 3.24, one cannot therefore infer that the policies accepted by the body should be close to its position. The issue is related to the theory of representation. When the role of elections is mainly to choose political leaders, and the preferences reflect voters' assessment of candidates' personal properties, it might be preferable to use a rule which would directly ensure the election of Condorcet-winning or Borda-winning candidates. But the modern party-based representative democracy is a two-stage system. If the role of elections is to choose representatives, who then have to deliberate and negotiate together and to try to formulate policies that would satisfy as many voters as possible, the important question is whether the policy-preferences of the representatives reflect voters' policy-preferences. As McGann (2004, 45) says: "The fact my preferred representative is your very least preferred is irrelevant—their job is to represent me, not you".

The supporters of the standard (list) forms of proportional representation may also argue that any positional rule for allocating seats which takes some lower-preference information into account inevitably produces the problem of irrelevant additional alternatives. If, for example, the Borda rule is used for allocating seats between parties in an assembly, a party may increase its share of seats by splitting itself up into two essentially similar but nominally different parties. The point is nicely illustrated in Sverker Härd's study on seat allocation rules in the *Riksdag* of Sweden (Härd, 1999, 2000). Using opinion measurements, Härd simulated the distribution of seats in the Swedish Parliament under different voting rules. When the seats were distributed according to the Borda score totals of the parties, the result was a massive shift of power from the Social Democrats to the small non-Socialist party groups. The obvious reason for this shift—not discussed by Härd—is that in Sweden the non-Socialist party groups are numerous, while on the Left the only alternatives are the Social Democratic party and the small Leftist (ex-Communist) party. The number of ideologically close parties multiplies their compound Borda scores (the same effect is illustrated in Example 3.13). If the Borda rule were actually used in the Swedish elections, the Left could regain its power simply by creating more, nominally independent groups. A more general result proved by van der Hout, de Swart and ter Veer (2006, 465–467) shows, how

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[65] For the notion of an Arrowian social welfare ordering, see (Arrow 1951/1963). The mistaken claim that the purpose of PR election is to produce a social ordering appears, for example, in Riker (1984a, 106) and in Bonner (1986, 92). There are, however, individual cases in which the ordering of the parties in a parliament *is* relevant for the final choice. Consider Art. 37. Sects. 2 and 3 of the Constitution of Greece: "…the President of the Republic shall give the leader of the party with a relative majority an exploratory mandate in order to ascertain the possibility of forming a Government (…). If this possibility cannot be ascertained, the President of the Republic shall give the exploratory mandate to the leader of the second largest party in the Parliament, and if this proves to be unsuccessful, to the leader of the third largest party in Parliament."

problems of this type can be avoided *only* by using first preference information as the sole basis for seat allocation.[66]

3.5.7   Proportionality, Power and the Formal Coherence Thesis: Does PR Empower Minorities?

Proportionality is often seen as a means of ensuring a fair treatment of permanent minorities. In the simple Example 3.22 of choosing three projects, proportionality indeed protects the minority. However, in a two-stage electoral process matters are more complex. While proportional elections may be related to *ex ante* political equality, they do not guarantee any *ex post* equality in decision making. This is not always recognized. For example, James L. Hyland (1995, 96–100) challenges the assumption that simple majority-rule is the unique democratic procedure. He uses an example in which the majority party has a 60 % support, while two other parties have a 30 and 10 % support respectively. If the task is to choose ten representatives, a purely majoritarian rule would give all the seats to the majority party. But this is not the unique democratic outcome, for there are "any number of well tried proportional representation election procedures (…) that could produce results that would give the minorities a retrospective influence proportional to their numerical weight" (Hyland, 1995, 97).[67] In this interpretation, the seat-allocation in a Parliament is seen in terms of influence rather than in terms of collective preferences.

However, it is well known that the distribution of seats in an assembly does not measure relative influence in an accurate way (Johnston, 1998). If an elected assembly uses simple majority rule in its internal decision-making, a party having 60 % of the votes and a proportional number of seats does not get just slightly more than half of the total power; it gets all of it. Proportional representation does not guarantee proportional influence. Although in a proportional system the number of seats gained by a party is (in the ideal case) not dependent on the relative distribution of votes among other parties, its *voting power* is dependent on the relative distribution of seats between the represented parties. Even when there is no majority party, proportional representation does not ensure proportional influence. To make the issue clearer, consider the following possible distributions of seats in two 100-member assemblies (*a,b,c*, and *d* being parties represented):

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[66] Bonner (1986, 93) remarks, "If it were practicable for voters to rank the names on party lists, or to delete candidates they disliked, the outcome could be more responsive to the detailed preferences but sophistication, manipulation, and the irrelevance aspect would be reintroduced."

[67] A similar (anti-majoritarian) contrast between majority rule and proportional representation is made by Jones (1983, 181–182), by Lijphart (1991) and by Gutmann (1999).

Example 3.25

(1)	a	b	c	(2)	a	b	c	d
	45	10	45		30	10	30	30

If the assemblies use the simple majority-rule, it is intuitively clear that (*ceteris paribus*) party *b* has more bargaining power in case (1) than in case (2). In the assembly (1), the possible majority coalitions are *ab, bc, ac* and *abc*. While party *b* has fewer seats than its competitors, it has an equal amount of bargaining power, for it is a pivotal member in two possible coalitions out of four. In assembly (2), party *b* has the same amount of seats as in assembly (1). However, its bargaining power has disappeared as it is not needed for making any coalition the winning one. While in plurality systems the distribution of *seats* may vary in an arbitrary way, in typical PR-systems the distribution of voting power is subject to similar arbitrariness. Various power indices, developed to measure *a priori* voting power in assemblies, confirm our intuitive result: voting power, as measured in terms of pivotal roles in coalitions, is not dependent on a voting group's relative size only. There is no linear relationship between the voting power thus measured, and a party's share of the seats. Then, it may be argued, proportional representation is not really an answer to the problem of permanent minorities at all. It is *power*, rather than seats in a parliament, that is in the interest of minorities. Proportional representation cannot ensure that this power is distributed in a proportionally fair way (On this argument against PR, see Johnston, 1984, 1998.). In a sense, this is, again, a violation of an independence condition of the Arrow-type: the relative amounts of power possessed by parties *a* and *b* are affected by the seat-distributions of the other parties. This is not due to the defects of the rules but the nature of power itself.

But there is a possible reply to this argument. Both our example and the power indices are *policy blind*. They are based on the supposition that all coalitions are equi-probable. In the real world, they are not. In the German *Bundestag*, the small German Liberal Party (FDP) has traditionally been in a pivotal position similar to that of party *b* in our imaginary assembly (1). Because the main German parties, the Christian Democrats and the Social Democrats, have often been unwilling to form a majority coalition together, the FDP has been represented in most German governments since the War.[68] Compare this with the position of the Austrian *Freiheitliche Partei* (FPÖ). It has similarly been a small third party in a system dominated by the large Christian/Conservative and Social Democratic parties. But it has been much less influential than the German FDP. The reason is that while the FDP has traditionally been identified as a Centrist party, the FPÖ stands at the Right side of the Conservatives. Thus, the larger Austrian parties have tended to prefer each other over the FPÖ. A power index which is blind to opinions cannot account for such differences. Even if the indices do, in some sense, measure power differences,

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[68] In 1982 the withdrawal of the FDP caused the fall of the third Schmidt cabinet and the establishment of the first Kohl cabinet. This is probably the most dramatic example of the disproportionate influence of the FDP in German politics.

they do not measure the *value* of power for an agent in actual situations.[69] If power is defined, as with Hobbes, "the present means to obtain some future apparent good", its value should be included in the definition.

Now we see a problem shared by Johnston's argument *against* PR *and* Hyland's argument *for* PR. Both arguments are based on the contrast between majority rule and proportional power-sharing. True, proportional representation does not allocate *a priori* voting power in a proportional way, when the notion of *a priori* voting power is based on the supposition that all coalitions are equally possible. However, if all coalitions between parties *were* equally possible, there would be no real ideological differences between them. And if there were no real ideological differences between party groups, proportionality would not matter, for the point is precisely that different ideological groups should be fairly represented (Duverger, 1984, 33). Indeed, the very idea of proportional representation is that there are ideological differences between parties. As long as there are such differences, parties are not likely to be policy-blind in their coalition strategies.

However, Johnston is still right when claiming that proportional representation does not really solve the problem of permanent minorities—Hyland's argument for PR is also mistaken. This can be seen if we compare the usual combination—proportional representation and majoritarian legislation—with methods such as fair distributions-schemes, minority veto, minority quotas, or corporative representation and decision-making. Unlike proportionality, these last methods are genuinely non-majoritarian, and they necessarily violate "one person—one vote; one vote—one weight" requirement (Hyland, 1995). In terms of social choice, these methods are non-neutral and/or non-anonymous. Unlike PR-systems, such methods may really ensure some proportionality of influence between the *recognized* minorities, and, consequently, a certain proportionality of outcomes.[70] For this reason, Hyland (1995, 99–100) also argues for such arrangements, aside with proportional elections. But then the question is: are all minorities necessarily entitled to have power in proportion to their size? *Should*, for example, Fascist or right-wing populist parties have a proportional share of power? Would it be *unfair* if parties such as the Austrian FPÖ were excluded from governments in spite of their relatively large first-preference support? Generally, methods designed to ensure proportionality of influence and the fairness of outcomes presuppose the existence of permanent,

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[69] Actually, the matter is quite tricky. As Manfred Holler has argued, my *unwillingness* to do something does not mean that I do not have the *power* to do it. However, if I can *only* acquire power to do things I do not want to do, I have no rational motive to acquire power. In such a situation, power has no *value* for me. Hence, the notion of power cannot be used to explain or predict my behaviour in such situations. This problem does not make power indices useless. They may provide some guidance for evaluating institutionally fixed allocations of power. The allocation of power between different countries in the institutions of the European Union is a good example of such a context. The expression "the value of power" is taken from Holler.

[70] Such schemes are particularly relevant in federal contexts, e.g. in the EU. However, because the actual influence of decision makers is dependent on coalitions (and, ultimately, on decision makers interests) *no* scheme of power-sharing can guarantee a proportional distribution of influence over outcomes.

identifiable minorities with stable interests. They do not treat voters or their representatives as (relatively) autonomous choosers.[71]

A majoritarian notion of fairness—which embodies the Condorcet criterion—demands that the power distribution among parties should be roughly proportional to their general position in voters' *overall* preferences, not only in their *first* preferences. Up to a point, a system based on proportional representation and majority rule in the elected assembly satisfies this demand. Suppose that in our assembly (2) (Example 3.25) party *d* is an extremist party which disagrees with all the other parties on most issues. Then, it is almost never on the winning side, although it has as many supporters as any of the other parties taken separately. Because the idea of proportional representation with majoritarian choice of policies conforms to the basic majoritarian logic, the result is as it should be, if the policies advocated by party *d are* generally unpopular. Coalition formation in multiparty systems tends to favour centrist parties. This seems to be acceptable, if the electorate itself sees centrist policies at least as second-best alternatives. According to the majoritarian logic, extremist parties are not entitled to a proportional share of power, not because they take extremist positions, but because extremist policies are usually rejected by majorities. Hence, it is not *prima facie* unfair to permanently exclude a relatively extremist party such as the Austrian FPÖ from governments. In 2000, when the FPÖ finally got into the Austrian government, some demonstrators opposing the party's participation carried the slogan "73 percent did not vote for Haider [the FPÖ leader]". Because no Austrian party got a majority in the preceding elections, this slogan could be interpreted as an implicit appeal to the Condorcet criterion: a majority voted *against* the programme of the FPÖ.

In the passage quoted above, Hyland argued that proportional representation distributes influence in a proportional way, and therefore it would fairer than majoritarian systems. Johnston's answer was that it does not actually distribute influence in a proportional way, and for this reason it need not be fairer than "majoritarian" representation. The irony of these conflicting arguments is that they are *both* wrong, and for the same reason. Both arguments rely on the same incorrect presupposition that the aim of proportional representation systems is to produce non-majoritarian *policies*. Actually, proportional systems of representation do not distribute influence in a proportional way because they, nevertheless, follow the majoritarian basic logic at the policy-making level. And *for the very reason that they follow the majoritarian logic, it may be argued that they generally produce fair results*. A view of this type is defended by Steffen Ganghof (2005) who argues against "the formal coherence thesis" (*die formale Kohärenzthese*) according to

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[71] In modern times, proportional power-sharing has often been incorporated into agreements made after civil wars. Examples of this are the Colombian pact between the *Blancos* and the *Colorados*, the Lebanese agreement in 1943, the 1960 constitution of Cyprus, the Good Friday accord in the Northern Ireland, and the present constitution of Bosnia-Herzegovina. They tried to guarantee peace by distributing power between various groups in a pre-determined way. The problem with these non-anonymous and non-neutral schemes is that they tend to cement the prevailing interests and power-relations.

which political equality requires that the electoral rules and the political decision-rules should be built on the same principles. Both Hyland and many opponents of proportional representation (for example, Spitz, 1984) share the formal coherence thesis, although Hyland defends minority influence while the latter defend major-itarianism.[72] An early opponent of the thesis was John Stuart Mill (1861/1972):

> In a representative body actually deliberating the minority must of course be overruled; and in an equal democracy (. . .) the majority of the people, through their representatives, will outvote and prevail over the minority and their representatives. But does it follow that the minority must have no representatives at all? (. . .) In a really equal democracy every or any section would be represented, not disproportionately but proportionately.

It is significant that in the quoted passage Mill, like van der Hout, McGann, and Ganghof, defends proportionality in terms of *individual* (liberal) equality.

3.5.8 The Majority Criterion and the Choice of Government

In elections, people authorize *governments*. By choosing a government, a modern society solves (at least temporarily) its value conflicts. Although minority govern-ments are not unusual, the general idea is that governments should enjoy absolute (first preference) majority support: "For a government to claim a mandate to carry out its policies it ought to be elected by at least half of the voters" (S. E. Finer). This is the *majority-mandate* conception of the voters-government relationship. The problem is that the first preference absolute majority criterion is not decisive. For example, in the period 1945–1975, 201 parliamentary elections were arranged in 22 Western democracies. In only 15 elections, a single party was able to capture at least half of the votes (Rose, 1978, 200). This provides one popular defence for first-past-the-post rule, or, more generally, for the single-member rules:

> Accountability stems from decisiveness. An election is decisive when it has a direct and immediate effect on the formation of government. It is easier for voters in a plurality system to get rid of the government they do not like; they just throw the rascals out and replace them with a new government. In a PR system, the fate of the government is decided only partly and indirectly by voters. (Blais & Massicotte, 1996, 73)

As we saw, the plurality rule is decisive: it always produces one single outcome in a district (saving the rare case when votes are tied). In a party-governed system, it usually also produces a parliamentary majority for a government. Thus, as its defenders often argue, it is able to produce "stable governments" as well as to provide "a clear choice" for voters. But this decisiveness has its price. Who are the "voters" who decide the fate of a government in a plurality system? While

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[72] The thesis is well formulated—although not necessarily endorsed—by Blais (1991, 247): "Real political decisions are made through majority rules and it is 'natural' to apply the same logic in the selection of decision-makers." For positions similar to that of Ganghof, see McGann (2004, 2006) and Riley (1988).

stabilizing the parliament-government relationship, the plurality rule may obscure
the voters-parliament relationship in a dramatic way. And if decisiveness were the
only consideration, a strong bonus-system would be even better. It could be tailored
so that it would produce a parliamentary majority for any distribution of votes.

Arend Lijphart (1997) has tried to measure the *popular* support of cabinets in
21 Western democracies in the period between 1945 and 1990. His measure of
"popular support" is the combined electoral support of the parties participating in
the cabinets. According to his results, of those 11 countries in which the average
popular support in that period was *over* 50 %, all except Japan had a PR-electoral
system. Of those countries where the average support was *less* than 50 %, six
countries out of ten had a single-member district system (they were the USA,
Australia, France, New Zealand, the U.K., and Canada). Similarly, in 11 countries,
the cabinet was supported by a majority more than half of the observed time—the
countries were the same 11 mentioned above except that Japan was replaced by the
USA. According to Lijphart, proportional representation systems are considerably
more successful than "majoritarian" democracies in achieving genuine majority
rule (Lijphart, 1997, 158).

However, Lijphart's findings do not settle the decisiveness-problem. Lijphart
interprets the support for a government party as support to the government coali-
tion. In proportional systems, however, voters do not vote for a coalition; they vote
for separate parties (Norton, 1997, 86). Because PR systems tend to foster
multipartism, coalition governments are usually necessary. This has two problem-
atic consequences. First, the governments may become unstable: for any possible
majority coalition there may be another coalition which can defeat it—this is the
core of the classical argument against PR-systems (It is easy to see how this
traditional argument may be connected to the problem of cyclical majorities
discussed in Sects. 3.2.5 and 3.2.6). Second, the government formation process in
PR-systems may become opaque and unresponsive, because general elections do
not provide sufficient guidance for choosing between different possible coalitions.
There is no clear interpretation for the voters-government relationship when the
first-preference majority criterion is unworkable. In multiparty systems, such com-
mon rules of thumb as the *plurality mandate*—"the largest party should be in the
government", or the *plebiscitary mandate*—"the winners of the most recent elec-
tion should form the Cabinet"—are of limited utility. There is no guarantee that
these principles are applicable or mutually compatible in a given situation. The sole
winners may be small factions who need the help of the losers to form a coalition,
the smaller parties may be unwilling to form a coalition with the largest party (for
example, because of its extremist policies), and the largest party may also be the
largest loser. Before the elections, parties and candidates may declare their coalition
intentions, and voters may use that information when making their choice as is
usually the case in the Swedish PR-elections. But, again, there is no guarantee that
these declarations, when taken together, would be coherent. For example, if an
extremist party suddenly enters Parliament, the traditional parties of the Right and
of the Left may be forced to form an unholy alliance against it, in spite of their
pre-announced coalition plans.

3.5.9   The Cordorcet Criterion and the Choice of Government

According to the famous dynamic argument put forth by Downs (1957), in a two-party system—typical in countries using the plurality-rule—the platforms of the parties tend to converge towards the middle or median position, which is the Condorcet-winning alternative in a one-dimensional continuum of alternatives.[73] The argument is based on the premises that (1) parties want to gain power, (2) they can get into power only by maximizing their share of votes, and (3) they choose their platforms in order to maximize their shares of votes, because (4) voters vote for the party which has a platform nearest to their own ideological position. Downs's conclusion is that plurality systems tend to produce Condorcet-winning policies. Power-interested parties move towards the political centre and stay there.[74]

   I am not going into details of Downs's argument. The conclusion, indeed, follows from the premises (1)–(4) *if* there are just two parties competing for votes, and *if* the electoral system accurately reflects their electoral support. In plurality systems, Duverger's Law (Sect. 3.2.4) usually ensures that there are only two strong parties. However, although Duverger's Law guarantees that under a plurality rule there are (*ceteris paribus*) only two major parties in the Parliament, it does not guarantee that there are only two parties or presidential candidates competing for votes. If there are several parties, premise (2) need not hold in a plurality system. In a three-cornered contest, a party or a candidate may hold a permanent majority position by adopting a platform which guarantees, say, a solid 40 % plurality. Then, the party has no further power-oriented motive to please any additional voters by moving towards the median (Condorcet-winning) position. In order to stay in power, the most rational strategy of the party is to secure its plurality rather than to try to maximize its support (consider the electoral tactics of the Thatcherite Conservatives in the 1980s). Indeed, because of the possibility of "spurious" majorities, it need not even be the plurality winner. Thus Downs's premise (4) does not hold in such cases. If the conditions (1)–(4) do not hold, there are no guarantees that the governmental policies would be close to the preferences of the median voter.

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[73] The connection between the *median voter position* and the Condorcet winning position is simple: if the voters can be ordered on one single axis (usually, Left-Right) according to their opinions, there are equal numbers of voters—less than a half—on the Left and on the Right side of the median position. The median voter is pivotal; the alternative supported by him/her is the Condorcet-winning-alternative.

[74] This conclusion is, of course, incompatible with the popular argument that the plurality systems usually provide a "clear choice" for voters. It is also incompatible with the Hobbesian conception of power mentioned above. To quote Lijphart again: "Parties are not pure power-maximizers. They want to participate in cabinets not just in order to hold a share of governmental power but also to collaborate with other like-minded parties to advance particular policies" (Lijphart, 1984, 58).

How well do the proportional representation system perform in respect with the median (Condorcet) criterion? Critics of PR such as Johnston argue that a PR system "takes the decision making regarding government formation away from the voters and places it into the hands of politicians negotiating without reference to the electorate in 'smoke-filled rooms'" (Johnston, 1998, 142; cf. Downs, 1957; see also Pinto-Duschinsky, 1999 for further sources). For the reasons mentioned above, the ruling parties may suffer considerable losses in elections and stay in power nevertheless. While coalition partners may change, policies adopted by a new ruling coalition need not be radically dissimilar to those of the old one.[75] But if PR-systems tend to produce Condorcet-winning policies, this should be expected. Voters' *first* preferences between alternative parties and coalitions may change, while the Condorcet-winning coalition (the one which is able to beat each of its alternatives in majority voting) remains as the same. Consider again the distribution of seats in an imagined assembly. Suppose that the distribution is proportional, i.e. it corresponds to the distribution of votes. Suppose, moreover, that voters' preferences over alternative coalitions are single-peaked, that is, can be ordered on a single dimension (Sect. 4.2.3). For example, a is a Leftist, b a Centrist and c a Rightist party. Voters' preferences among different coalitions are determined by ideological considerations:

Example 3.26

39 % of voters	20 % of voters	41 % of voters
a	b	c coalitions
ab	ab or bc	bc
ac	ac	ac
b	a or c	b
bc		ab
c		a

In an idealized PR system, the result is a coalition between party b and one of the major parties—ab or bc. The resulting coalition is a Condorcet winner, for it satisfies the *second preferences* of 59–61 % of the voters. This may remain true even when there are considerable changes in voters' *first* preferences. As long as none of the three parties gets an absolute majority of the seats, coalitions ab and/or bc will remain Condorcet winners, and party b will stay in government.[76] The critics of proportionality are likely to object that the outcome is no-one's favourite; it is a result of the negotiations conducted in the "smoke-filled rooms" rather than a

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[75] Of 25 Western democracies, only in nine has there been "a clear connection" between electoral results and government changes. Among these nine, two countries use the plurality rule, four use list-PR systems, and three use others systems (Ware, 1989, 15).

[76] According to Laver and Scofield (1990, 113), of the all European coalition governments formed in 1945–1987, mainly in countries using a PR system, over 80 % contained or were supported by parties that occupied a median position on the right–left dimension. This gives further support to the hypotheses that the voters' preferences were single-peaked and that the winning coalitions were often Condorcet-winners.

logical outcome of a popular election. In a plurality system, one of the major parties (for example, c) is likely to acquire an absolute majority of the seats in the assembly. It can form the government alone, thus satisfying the *first* preferences of 41 % of the voters. Which result is better? If the Condorcet criterion is considered the most consequential extension of the majoritarian principle (as Hoag and Hallett, Riker, Tännsjö, McLean and others think, see Sect. 3.2.2), proportional representation may have more majoritarian consequences than the plurality rule. Even if we were not fully convinced of the supreme importance of the Condorcet criterion, we should note that a government resulting from the "winner takes all" logic of the plurality rule may be the *least-preferred* alternative for a majority of voters.

G. Bingham Powell and George S. Vanberg (2000) have compared the voters' median positions and the legislatures' median positions in 17 countries in 1977–1983. In their study, they chose the Left-Right dimension as the central one, and used a ten-point scale. Their sample included several countries using single-member (SMD) systems: Australia (AV), Canada, New Zealand, the United Kingdom and the USA (plurality), and France (plurality runoff), as well as countries with various proportional systems. The proportionality of elections was measured by using the so-called Gallagher disproportionality index (on this index, see Powell & Vanberg, 2000, 3). The results were the following:

	Disproportionality		Distance of legislative median from citizen median		
Electoral law	Mean	Standard deviation	Mean	Standard deviation	No. of cases
PR effective threshold					
Below 4 %	1.7	(0.53)	0.68	(0.51)	20
4–7 %	2.7	(1.04)	0.49	(0.45)	20
7.1–13 %	7.1	(1.97)	0.94	(0.94)	9
Single member systems	12.5	(5.02)	1.47	(0.71)	21
Total	5.9	(5.47)	0.89	(0.74)	70

Adapted from Powell and Vanberg (2000, 41)

We see that the distance between the legislative median and the citizens' median increases when proportionality decreases. Moreover, the winning parties in the SMD systems were not generally those nearest to the citizens' median. According to Powell the average government formed after an election in plurality systems was 1.7 points from the citizen median on a ten point-Left-Right scale, while in PR systems it was only two-thirds as far away (Powell, 1999, 130; cf. the similar results in Colomer, 2001). If citizens' preferences are one-dimensional (single-peaked, see Sect. 4.2.3) on this scale, the government corresponding to the citizen median is the Condorcet winner. Contrary to expectations, the electoral results produced by the SMD systems were more "unrepresentative" in *both* senses of the term: they were *disproportional*, and produced legislatures which diverged from the *Condorcet criterion*. Thus, Downs' argument notwithstanding, it may be true that in the real world proportional systems produce more majoritarian policies than the

"majoritarian" plurality systems do. More exactly, *if* voters have well-defined preferences among different policies (as supposed by Downs), *if* the representatives generally have the same preferences as their electors, and *if* the rules by which the representatives decide on policies are likely to pick the Condorcet-winning alternatives, then PR systems are likely to produce majoritarian policies. Both Lijphart's simple first-preference majority test and Powell's and Vanberg's more sophisticated Condorcetian test indicate that PR systems are generally *more* compatible with the majoritarian theory of democracy than "majoritarian" plurality and runoff-systems.

The more detailed results of McDonald and Budge (2005) confirm the findings made by Powell and Vanberg. McDonald and Budge study 21 Western Parliaments, from the early 1950s to 1995. According to them, the median legislative parties were supported by the median electors in 69.1 % of the parliaments elected by SMD rules, and in 85.4 % of the parliaments elected by PR rules (McDonald and Budge, 2005, 28). Translating the result into social-choice language, in the positive cases the Condorcet-winning position in the parliament was also a Condorcet-winning position in the electorate. The authors also show that the resulting policies largely followed the preferences of the median voters. McDonald and Budge distinguish between 'consensus democracies' (in which parliaments are elected proportionally, and policies formed in multiparty negotiations) and 'majoritarian' or 'pluralitarian democracies' (in which parliaments are elected by SMD rules, and policies usually determined by the winning majority parties) and conclude that in the former group, the "median mandate" theory works quite well. Even if policies do not generally enjoy the first-preference support of popular majorities, they are Condorcet winners. While Finer's "majority mandate" requirement is rarely applicable, and the "plurality mandate" or the "plebiscitary mandate" may actually be incompatible with the majority principle, the weaker *Condorcet* (or *median*) *mandate*-requirement is typically satisfied in PR-systems. In spite of the relative opacity of cabinet negotiations in multi-party systems, the politicians in their "smoke-filled rooms" usually seem to end up by agreeing on policies which would be winners in pair-wise comparisons conducted among the citizens. Hence, it is not necessarily true that "the PR school looks at the composition of a parliament; majoritarians look at its decisions" as McLean (1991, 175) puts it. If the formal coherence thesis is abandoned, proportional representation may also be defended on the majoritarian, policy-oriented basis. According to this argument, PR-systems are superior both in respect with both the voter-parliament relation and the voter-government/policies relation.[77] (Of course, people may not have any well-defined preferences over alternative policies, but this may equally be the case in the SMD-systems.)

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[77] Jack H. Nagel's study (2012) on the democratic performance of New Zealand before and after the move from a plurality system to a (mixed) PR-system gives further support for the thesis that proportional representation "is important not just to serve representational goals, but also to achieve majoritarian goals: a government supported by a majority of voters, a governing party that represents the median voter, and specific policies acceptable to majorities that may—and should—differ from issue to issue" (Nagel, 2012, 10).

To sum up, there are two conclusions. The first, negative, conclusion is that the arguments against proportional representation are inconclusive. The second, positive conclusion is that there is at least a conditional argument for proportional representation. There is, after all, no unbridgeable gap between the basically majoritarian view of democracy and the principle of proportionality. *If* we agree that (i) representation is a necessary device in the modern, state-wide democracies, that (ii) policies should nevertheless be responsive to the preferences of the people (or at least, of majorities), and that (iii) the Condorcet-criterion is the best interpretation of the will of the people when there is no unambiguous majority will, *then* there is a case for proportional representation combined with a Condorcet-effective rule for choosing policies in the parliament. Because the combination of PR-rules and majoritarian legislation is quite common, Condorcet's ideas have actually been built into many actual systems—*contra* a sceptical comment of Joseph A. Schlesinger (recorded by Abramson, 2007, 291). This argument, however, presupposes that (iv) the political space is one-dimensional, or at least, that different political dimensions (welfare issues, foreign policy etc.) are closely correlated. In such conditions, underlying cycles over important issues are unlikely. If all this is true, the results produced by Powell and Vanberg, Colomer, and McDonald & Budge support the Condorcetian argument made for proportional representation and against the formal coherence thesis.[78]

3.5.10 Conclusion: Trade-Offs and the Meta-paradox

In the social choice literature the standard formulation of the research problem is: how to aggregate individual preferences into collective orderings or choices in a rational, regular and fair way? Generally, the message of the literature reviewed here seems to be rather dismal. No possible method works in a rational and fair way under all imaginable circumstances. However, some voting rules seem to be better than others in the sense that they satisfy more criteria than the rest. Could we, then, simply pick the rule or rules that are compatible with the *greatest* number of the criteria of social choice? Some contemporary theorists (for example, Brams & Fishburn, 1983; Dummett, 1997; Hillinger, 2004; Smith, 2006) think that the social choice considerations should play a decisive role in choosing a voting rule. Some of them have made extensive comparisons between various rules and tried to rank the

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[78] Budge and McDonald (2009) have qualified their median mandate-thesis. When a plurality party is large and has a commanding lead over its rivals—say a 46 % vote share and a 20 % lead—it can be said to represent the majority will even when a "careful analyst" would judge a smaller party as the median party. Their limited endorsement of the plurality mandate in cases like this is based on epistemic considerations. If only a small fraction of voters do not think in uni-dimensional terms, the plurality winner may actually be the Condorcet-winner in spite of the estimation made by "the careful analyst": For a similar probabilistic argument for qualified runoff—rules in single-office elections, see Shugart and Taagepera (1994) and O'Neill (2007). Cf. note 21 above.

rules according to their performance (Felsenthal, 2010; Smith, 2006; Tideman, 2006, ch. 12). Indeed, Richelson (1975), who initiated the comparative approach, explicitly stated that such comparisons may be used to determine "which voting procedure is the best one". However, other comparativists (for example, Nurmi, 1987, 1991, 1998) have taken a more cautious attitude.

Michael Baurmann and Geoffrey Brennan (2006) have remarked that when interpreting the impossibility results, we should make *comparative* rather than categorical judgments, think in terms of "betterness" rather than in those of "good" and "bad" or "best". The obvious conclusion to be drawn from Arrow's result is that we have to give up *something*; "some trade-off among the various specified meta-level desiderata (…) will be necessary". Thus we have to form complex comparative judgments about the relative performance of alternative institutions: in the relevant situation, rule A satisfies a given criterion better than B, while B is somewhat better than C. But such complex comparative judgments may produce a "meta-paradox" of social choice; the theory can be used to illustrate its own difficulties I have briefly mentioned that the many impossibility results can also be interpreted as problems in multiple criteria decision making. First, the proliferation of new social choice concepts and new impossibility results creates a further problem. Due to the enormous number of conflicting and *prima facie* plausible criteria of fairness or rationality, it is possible to make a case for (or against) almost any minimally reasonable decision-making method. One has just to choose a suitable set of criteria, ignoring the rest. From the standard impossibility results we know that by adding and/or removing criteria, and/or options under consideration, we may manipulate the ordering at will.[79] In our survey, we have seen how many theorists have done just that: by choosing some criteria for a good democratic rule they have built theoretically articulated cases for (or against) the majoritarian rules, Borda count, approval voting, utilitarian rules, single transferable vote, plurality rule and so on. All these arguments, when taken separately, sound rather plausible. Thus, the ultimate "paradox" of social choice theory is that the very richness and complexity of the theory diminishes it useful-ness as a practical tool in normative political theory. The indeterminacy re-emerges at the theoretical level. There are too many apparently criteria.

Second, if we use more than two criteria, any systematic attempt to compare the performance of decision rules, to rank them, and to determine the best method(s), is likely to lead to an *aggregation paradox similar to that of Condorcet's*. Let us use some earlier examples of the properties of voting rules to illustrate this meta-paradox. Suppose that we want to replace an existing system, say the plurality

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[79] Consider, for example, the comparisons made, respectively, by Warren D. Smith (2006) and by Dan S. Felsenthal (2010). Smith compares 43 (!) voting rules, using 15 formal criteria plus some informal ones, while Felsenthal compares 17 rules using 14 weighted criteria. In Smith's compar-isons, the approval and range voting emerge as the best, while all the Condorcet- consistent rules fare rather badly. By contrast, in Felsenthal's comparisons the approval and range voting are the *worst* systems, while two Condorcet-consistent rules (Kemeny's and Copeland's) emerge as the winners!

rule, with a system which takes *some* lower preferences into account. We have to find the best "preferential" voting system. Let us suppose that for some practical reasons we have to limit our attention to the three preferential systems discussed in the earlier chapters of this work: the AV/STV-system, the supplementary vote, and the Bucklin system. We consult the social choice literature, and select three plausible-looking criteria for a "preferential" system: Condorcet-efficiency (Sect. 3.2.3), monotonicity (Sect. 3.5.5), and immunity to strategic truncation of preferences (Sect. 4.3.3). Using these three criteria, the respective rankings may look, for example, like this:

1. *Condorcet-efficiency*: AV/STV > Bucklin > supplementary vote.
2. *Monotonicity*: Bucklin > supplementary vote > AV/STV.
3. *Immunity to strategic truncation*: supplementary vote > AV/STV > Bucklin.

   Each system is ranked under some other system by two criteria out of three; there is a cycle of rankings. A series of pair-wise comparative judgments may lead to a cycle.

   The possibility of meta-paradoxes shows that comparative judgments are not enough. However, in a sense meta-paradoxes are far less serious than the initial problems of social choice. In voting contexts, the impossibility results are *prima facie* troublesome, because the proper task of various voting rules *is* to aggregate preferences in a neutral and mechanical way. But social ethics is not a matter of mechanical aggregation. There is no reason to base the choice of society's basic institutions on a neutral and mechanical aggregation of ordinal comparisons; some criteria *are* more important, more plausible and more relevant than others. To take a real-life example: In Chapter 7 we will find that both the Finnish Electoral College (abandoned in 1994) and the present Electoral College of the United States are, in different ways, defective instruments of making political choices. This judgment is informed by the theory of social choice, but cannot be based solely on a "neutral" social choice analysis. What is needed is a comprehensive *normative* account, a philosophy of democracy that would tell us what a good voting system *should* do. Moreover, the weighing of normative criteria cannot be isolated from the empirical assessments. For example, people's cognitive capacities limit the set of practically relevant situations: in most contexts, people cannot be treated as perfectly informed, equipped with unlimited computational capacities or unlimited organizational abilities. Usually they cannot rank hundreds of alternatives or follow extremely complex strategic prescriptions. Moreover, "political culture" is relevant at least in two ways. Preferences are not distributed among voters by turning a roulette wheel: they reflect the socio-political facts of the relevant societies. Some forms of strategic behaviour may be incompatible with the norms and conventions of a society. A good normative theory of democracy can be developed only by combining the insights of the social choice theory, normative philosophy, *and* the empirical study of democratic societies.

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Chapter 4
Arrow's Theorem

4.1 The Impossibility Theorems

The theoretical importance of the Condorcet paradox (introduced in Sects. 3.2.5 and 3.2.6) is that it shows the way to the central result of social choice, the (in)famous Arrow's (Im)possibility Theorem. The Theorem itself is the first in a long series of similar results. Most of them are impossibility theorems: they show that functions of certain type do not exist. Here, I try to give an accessible version of the celebrated result. Many of the conditions needed in the proof of the theorem are already introduced during my earlier discussion, directly or indirectly.

4.1.1 Arrow's Theorem

First, *completeness* and *transitivity* of preference orderings are supposed. Second, the *universal domain* condition holds. Whatever the distribution of the individual preference rankings is, a collective ranking can always be produced. The completeness and transitivity requirements could be labelled as 'rationality' conditions (we shall discuss their rationality later). Some other conditions are related more directly to the democratic nature (or fairness) of the process although they are very mild. The *unanimity* condition or the (weak) *Pareto* condition says that if all decision-makers prefer x to y, x should be ranked higher than y in the collective preference-ranking. The *non-dictatorship* condition says that there exists no single decision-maker whose preferences always determine the collective preferences. The *independence* condition (more often: the *independence of irrelevant alternatives*) requires that the collective preferences over a pair (or a set) of alternatives should be determined only from the individual preferences concerning the alternatives in that pair (or set). Hence, if the individual preferences of in respect of a set of alternatives do not change, the collective ranking remains the same. Independence

can, then, be seen as an informational requirement. It requires that rankings (and decisions) should be based on a specific type of information only.

Now we have all that is needed for the theorem.

Arrow's Theorem: There is no function (*social welfare function*) which satisfies all the following conditions:

(i) Universal domain
(ii) Pareto (or unanimity)
(iii) Non-dictatorship
(iv) Independence, and
(v) Gives a transitive and complete ordering.

I shall not give a full proof, for it can be easily found in any introductory text on social choice theory. However, I shall give a shorthand version that makes clear the connection between the Condorcet Paradox and the theorem, and also shows how all the conditions have a role in the proof. Let us define a set of individuals as *decisive* for alternatives x and y if the given function yields a social preference for x over y whenever all individuals belonging to the set prefer x to y. Thus, the members of a decisive set are able to impose their preference in respect of this pair of alternatives even when *all* the others have opposite preferences. Under majority rule, for example, a decisive set contains more than half of all the decision makers. In an oligarchy, the decisive set has to contain some particular members. Because of the unanimity or Pareto condition (ii), there has to be a decisive set, for at least the set of all members must be decisive. Let D denote such a decisive set for alternatives x and y, and let C denote its complement, that is, those who do not belong to the decisive set. The universal domain condition (i) allows the following preference distribution:

D	C
x	y
y	z
z	x

Because D is decisive in respect of the pair $\{x, y\}$, the collective prefers x to y. By unanimity (ii), it has to prefer y to z. By transitivity (v), it therefore prefers x to z. But only the members of D have this preference. Now, because of the independence condition (iv), this collective preference does not depend on the position of y. Hence, D is also decisive in respect of the pair $\{x, z\}$. The same proof also applies to the pair $\{y, z\}$. Hence, when D is decisive for one pair, it is decisive for every pair. In the context of voting rules, this result has an intuitive interpretation: if some voter group is strong enough to ensure that candidate x rather than candidate y is elected, it is also strong enough to ensure that y rather than z is elected.[1]

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[1] As Hobbes says in *The Elements of Law*: "...from this may be deduced that which to some may seem a paradox: that the command of him, whose command is a law in one thing, is a law in every

Because of the non-dictatorship condition (iii), the decisive set D must contain more than one member. Hence, it can be divided into two non-empty subsets; let's call them *A* and *B*. The universal domain condition (i) requires that a complete and transitive ordering (v) can be produced even for the following distribution:

A	B	C
x	*y*	*z*
y	*z*	*x*
z	*x*	*y*

This is the familiar Condorcet paradox discussed above. Now, because *A* and *B* together constitute the decisive set D and they both prefer *y* to *z*, the collective has to prefer *y* to *z*. In respect to the pair {*x, y*}, the members of the decisive set disagree. If the collective prefers *y* to *x*, then *B* is decisive for this pair, for all the others (the members of A and C) have an opposite preference. On the other hand, if the collective prefers *x* to *y*, then, by transitivity (v), it also prefers *x* to *z*, and then it is *A* that is decisive for this pair. Thus, either *A* or *B* must be decisive over a pair of alternatives.

The first part of the proof shows why a set which is decisive for one pair is necessarily decisive for all pairs. By the same argument, either *A* or *B* must be decisive for all pairs. If this decisive subset contains only one member, he or she is a dictator. If it contains more members, the last part of the proof can be repeated by dividing the decisive subset into new subsets until we reach a subset with only one member, thus contradicting the non-dictatorship condition (iii). Hence, the conditions (i)–(v) are not mutually compatible. Q.E.D.

The version of the theorem presented above follows Arrow's later formulation (from 1963). There are other versions. The following version has essentially the same logical force, but it shows the connection between the impossibility theorem for more than two alternatives and May's possibility theorem for two-alternative cases.

The Extended Impossibility Theorem   There is no function which satisfies all the following conditions:

  (i) Universal domain
 (ii′) Anonymity
(iii′) Strong neutrality
(iv′) Strong monotonicity, and
  (v) Gives a complete and transitive ordering.

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thing" (Chapter xxix, 3). Van Mill (2006, 105) argues that this similarity between Hobbes's theory of sovereignty and the social choice results is not purely coincidental. One possible connection is this: Hobbes' argument for sovereignty and Arrow's proof of his theorem may both be presented as regress arguments showing that certain forms of consistency require the existence of a single all-powerful decision-maker. For Hobbes, see Lagerspetz (1995, Chapter 6); for Arrow, see MacKay (1980).

The theorem says that there is no way of generalizing May's theorem to apply to cases where there are more than two options. The relationship between the conditions used in the two versions is rather straightforward: Arrow's non-dictatorship (iii) follows from May's anonymity (ii′) (a dictatorship is a non-anonymous rule if any!), independence (iv) follows from strong neutrality (iii′), and the (weak) Pareto condition (ii) follows from strong monotonicity (iv′) and weak neutrality (which follows from strong neutrality). The pairwise majority rule (the Condorcet criterion) satisfies conditions (i)–(iv′); hence, it also satisfies Arrow's conditions (i)–(v). But, as we have seen, it does not satisfy the rationality condition (vi) in the paradoxical cases, and may therefore fail to produce any outcome, in other words, to satisfy May's decisiveness. Later (Sect. 4.2.6) we see that condition (vi) may be weakened considerably and still end up as an impossibility.

4.1.2 On Judgment Aggregation Paradoxes

One of the achievements of the formal theory of social choice is that it can be applied to different contexts. In the interpretation discussed in the earlier chapters of this work, rankings are interpreted as preferences of individual voters. To quote List (2004, 495):

> Classical models of social choice represent collective decision-making as the aggregation of individual preferences or votes into collective outcomes (. . .). Although they illuminate many aspects of collective decision-making, these models focus mainly on the ranking of, or choice among, alternative *outcomes*. They do not capture the *reasons* given in support of choices, the *beliefs* choices are based on, and the *constraints* choices impose on other choices.

The ranking-model leads to the conception of *social rationality as transitivity* (Sect. 4.2.6). The view that rationality is essentially the search for the *best* or the optimal alternative presupposes transitivity (or at least acyclicity, that is, exclusion of top-cycles). As McGann (2006, 121–122) notes, this idea is accepted by Arrow and Riker as well the classical theorists of democracy. It is, however, possible to go beyond the preference-transitivity interpretation while still using the aggregative model. The theory of *judgment aggregation* is an alternative interpretation of certain social choice results. Under this interpretation, voters are assessing the truth or falsity of some propositions rather than expressing their preferences. Contrary to many critics, the applicability of the theory of social choice does not presuppose a "maximizing" conception of rationality. Instead, it defines collective rationality as logical consistency. Interestingly, the paradoxical nature of social choice persists even after the redefinition.

Formally, judgment aggregation is related to compound aggregation of majority preferences discussed in Sects. 6.2.1–6.2.7. In both applications, May's simple dichotomous single-choice setting is extended to a setting of several interconnected but still dichotomous choices. It should be noted that although the new results on judgment aggregation are not simply reducible to the old preference-based results,

the main difference between the two approaches is on the level of interpretation. The task of aggregation mechanisms is to produce a collective judgment of the group; under this interpretation, the social choice problems are related to the generation of complex aggregated judgments from individual judgments. Courts, juries, administrative boards, and panels of experts are typical examples of contexts in which categorical true-false judgments rather than preferences are the subjects of aggregation. If democracy is seen as a deliberative process which should provide, not only authoritative decisions but decisions supported by reasons and if, nevertheless, majority decisions are unavoidable, this application of the theory of social choice is potentially relevant for the theorists of deliberative democracy.

Condorcet's Paradox is possible when there are at least three options (proposals, candidates) to be considered. In judgment aggregation contexts, a somewhat similar paradox may arise when there are at least three separate *propositions* to be accepted or rejected, and they are somehow interconnected. The general problem of judgment aggregation was introduced into the recent discussion by Kornhauser and Sager (1986, 1993) under the name of Doctrinal Paradox, and generalized and analysed by Philip Pettit and Christian List in great detail in their numerous works (e.g. List, 2006; List & Pettit, 2002). In modern presentations Kornhauser and Sager are usually mentioned as the inventors of the problem. However, the same problem was already analysed in detail—in its proper social choice context—by an early pioneer of voting theory, the Danish lawyer Albert Heckscher (1857–1897). In the last chapters of his dissertation *Afstemningslære* (1892), Heckscher focused on the role of voting in multi-member courts, a subject of which he had first-hand experience. According to him, courts are faced with voting problems of two types. First: what is the preferable voting method? Second: should the judges vote on premises as well as on conclusions, only on premises or only on conclusions? (ibid., 117) Here, Heckscher takes up issues which have become topics in the theory of social choice only during the last 15 years. Heckscher's example of the latter problem is the following (pp. 115–116):

> One judge acquits the defendant, for he does not consider the charge to be proven, one because he does not consider it punishable, and one, because he considers the defendant to be unaccountable. Each judge, supposing that he is forced to express his opinion on each point, rejects the reasons of acquittal held by the two others. The problem becomes then, if one can declare the acquittal being unanimously accepted, or whether one should rather vote on reasons and present three questions on premises: Is the charge proven? Is the act punishable? Is the defendant culpable? so that the result, if *in casu* the answers to each question are detrimental to the defendant, may be that the defendant is found guilty (...).

There are, then, three judges (A, B, and C) who have to answer to three separate questions. (P): Did the defendant perform the relevant act? (Q) Was he culpable (that is, *compos mentis*, not acting under duress etc.)? (R) Was the act unlawful? The answers are the court's reasons (*Grunde*) for its decision. The answer to the question (S) "Should the defendant be punished?" depends on the answers given to the questions (P), (Q) and (R). In the example, the answers given by different judges diverge:

Example 4.1

Judges	(P)?	(Q)?	(R)?	(S)?
A	N	Y	Y	N
B	Y	N	Y	N
C	Y	Y	N	N
Majority	Y	Y	Y	N

In the example, a majority of the judges answers affirmatively in each of the questions (P), (Q) and (R). Hence, if the judgment of the court is based on a majority voting, the court should also accept an affirmative answer to the last question (S): the defendant should be punished. However, the individual members of the court reject the proposition *unanimously*. Nevertheless, all the individual judges vote in an individually consistent way. Heckscher discusses this problem on several occasions (pp. 122–124; 149–151; 169–170), and gives further examples. One is the following. A three-member committee hast to assess the profitability of a planned new railway-line. One of the members thinks that the line will be economically viable because of increasing coal transportation, another because of increased salt-transportation and a third because of the increase in the number of people using the railway as a means of transport (p. 123).

Perhaps the most interesting aspect of Heckscher's treatment of the paradox is his discussion on the *premise-based* and *conclusion-based* procedures, or, in his words "voting on reasons" (*Afstemning efter Grunde*) vs. "total voting" (*Totalafstemning*) or "voting on the result" (p. 117). In judgment aggregation contexts, decision-makers are expected to form a collective judgment on reasons underlying the decisions, that is, on several, interconnected propositions. They may accept some of the propositions as premises and derive the collective judgment on the conclusions from the collectively accepted premises rather than voting directly on the outcome. Consider again the example above. The three judges may first take a majority vote on the proposition "Did the defendant perform the relevant act?" (P). Then they may vote on the propositions: "Was he culpable?"(Q) and "Was the act unlawful?" (R). They unanimously agree on the truth of the conditional proposition: "The defendant ought to be punished (S) if and only if he performed the act, he was accountable and the act was unlawful" (or: (S) $\leftrightarrow$ (P) & (Q) & (R)). Then, there is no need to take a separate vote on the conclusion; the majority judgments on the propositions (P), (Q) and (R) determine it. Another alternative is that the judges vote only on the conclusion (S). This conclusion-based majority procedure is—at least in our simple examples with one single conclusion—simply a case of an ordinary majority voting with a single decision and two alternatives. The Discursive Dilemma or the Judgment Aggregation Paradox consists essentially of the fact that in some cases—as in Heckscher's example—these two procedures produce differing conclusions. In other words, the content of the decisions is dependent on the decision-path. All these insights of Heckscher have been re-found and rigorously analysed by List, Pettit and their co-workers (List, 2006).

4.1.3 The Judgment Aggregation Impossibility Theorems

Arrow's theorem can be seen as a generalization of Condorcet's paradox. For the Judgment Aggregation Paradox there exists a similar generalization. Suppose that the following conditions hold. There are at least two individual voters. There is a fixed *public agenda*, that is, a set of propositions on which the voters have to make judgments, to judge each of them as true or false. The agenda contains at least two distinct *atomic propositions* (for example, "there was a valid contract" and "there was a breach") and at least some of their molecular compounds (two or more propositions connected by the basic logical connectives). Suppose, moreover, that the personal judgments of individuals are *complete* so that for all propositions on the agenda each of the individual voters accepts either a proposition or its negation. Their personal judgments are *consistent*: an individual voter never accepts both a proposition and its negation. Finally, the personal judgments are *deductively closed*: individuals accept all the propositions logically entailed by those propositions they have already accepted. Now we define a *judgment aggregation function* as a procedure which takes as its input a collection (profile) of complete, consistent and deductively closed sets of individual judgments, and aggregates them as a set of collective judgments which satisfies the very same requirements, that is, it is also complete, consistent and deductively closed. As in the standard theory of social choice, we may specify some reasonability conditions for such functions.

Universal Domain This, although now defined for judgments rather than for preferences, is strictly analogous to Arrow's corresponding condition. Any logically possible combination of individual judgments is admissible as input to the aggregation, if these judgments satisfy the logical requirements mentioned above.

Anonymity This requirement is similar to the requirement used in May's Theorem. Informally, it ensures that all the individuals have an equal weight in the aggregation process.

Systematicity This condition requires that (1) the collective judgment on each proposition should depend exclusively on the pattern of individual judgments on *that* proposition, and that (2) the *same* pattern of dependence should hold for all propositions. Part (1) of the systematicity requirement corresponds to Arrow's "independence of irrelevant alternatives". Part (2) corresponds to the neutrality condition used in social choice theories. If, for example, a simple majority of judges may decide whether there was a valid contract, a majority of the same size is also able to decide whether the defendant was liable.[2] Together, (1) and (2) are close to the *strong* neutrality condition used in May's Theorem. Additionally, systematicity excludes *imposed* collective aggregations. Consider a function which determines the truth or falsity of all the relevant propositions irrespectively of the individual

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[2] Courts may also be subject to qualified majority requirements; this is the case, for example, in the German Supreme Courts in some issues.

judgments of voters. Such a procedure is incompatible with the second part of the systematicity condition introduced by List and Pettit, for it determines that some propositions are automatically accepted, and therefore some other propositions, namely the negations of the accepted propositions, are automatically rejected. Hence the condition, in effect, does some of the job performed by Arrow's weak Pareto condition or May's monotonicity condition which also exclude imposed aggregations. Systematicity is, then, *much* stronger than the independence condition in its Arrowian form. The relevant impossibility theorem is the following (List & Pettit, 2002):

The Judgment Aggregation Theorem There is no judgement aggregation function which satisfies all the following conditions

(i) Universal domain
(ii) Anonymity
(iii) Systematicity
(iv) Completeness (or decisiveness)
(v) Consistency
(vi) Deductive closure.

The role of agendas is central in the impossibility proof related to judgment aggregation. May's theorem may be seen as a special case: the majority principle is an unproblematic way to make collective judgments if the agenda is a minimal one, containing only one proposition and its negation {P, −P}. If there are several unconnected propositions (for example, {P, −P, Q, −Q, R, −R}), the "Paradox" of Multiple Elections is possible (see Sect. 6.2.4). In other words, it is possible that while each of three or more propositions on the agenda is supported by *some* majority, there is no majority supporting simultaneously *all* the accepted propositions. This "Paradox" of Multiple Elections is not more unintuitive than the fact that a Condorcet-winning candidate or policy need not be the first choice of any voter. Although the majority of the voters do not think that the final result—a candidate or policy in the standard case, a set of accepted propositions in the judgment aggregation case—is the best one, the majority cannot agree on what would constitute a better alternative. This, we may argue, is simply a part of the normal mechanics of democracy: usually there is no monolithic majority but several, partly overlapping majorities. However, when the accepted propositions are somehow *interconnected*, a genuine paradox may arise. Logical relations are one possible form of interconnections between alternatives on the agenda. Again, there are several closely related impossibility theorems. The following version (Dietrich & List, 2007) resembles Arrow's Theorem:

Theorem For a sufficiently complex agenda (set of propositions voted on) there is no judgment aggregation rule which satisfies all the following conditions:

(i) Universal domain
(ii) Unanimity
(iii) Non-dictatorship

(iv) Independence
 (v) Consistency and completeness of collective judgments

Is this result simply a consequence of Arrow's Theorem (or of some other well-known result proved in the standard social choice theory)? The answer is no. Although Arrow's Theorem and the judgment aggregation theorem above are quite similar, there is no simple way to map the dichotomous judgments into Arrowian rankings. However, the opposite route is possible. Instead presenting the full proof, I shall just give an illustration. We may interpret the preferences between candidates or policies as *comparative judgments* ("candidate x is better than candidate y"). The relevant agenda consists of such propositions and of their negations. We have to suppose that the preference-judgements obey the standard rationality principles for preference rankings (transitivity, asymmetry and completeness). The Condorcet-paradox may be transformed into the judgemental form in the following way:

Example 4.2

	$x > y?$	$y > z?$	$z > x?$	$x > y \;\&\; y > z \;\&\; z > x?$
A	Y	Y	N	N
B	Y	N	Y	N
C	N	Y	Y	N
Majority	**Y**	**Y**	**Y**	**N**

In the example all the three comparative judgments are supported by some majority, while their (intransitive) conjunction is not supported by anyone. Hence, the deductive closure requirement (vi) is violated. Thus, Arrow's Theorem may be seen as a special case of the judgment aggregation theorem rather than the other way round.

4.1.4   On Interpretation

As such, Arrow's theorem and its logical relatives are "mere" formal results. They do not determine their own interpretation. One of the achievements of the formal theory of social choice is that it can be applied to different contexts. At the general level, they can be interpreted as results about different ways to process information included in ranking-orders of individual elements in order to produce a more general ranking, or to choose one or several elements. (1) We may interpret the results as saying something about the constraints upon social decision-making mechanisms. Electoral rules, voting rules used in referenda, in Parliaments, local councils, committees, multi-member courts, juries, private associations, international assemblies and stockholders' meetings are all examples of such mechanisms. In this interpretation, the "inputs" are individual rankings which reflect decision makers' opinions about the merits or demerits of different alternatives or candidates. Following Sen (1982), we may further distinguish between (1a) the

aggregation of individual *interests* into social decisions and (1b) the aggregation of individual value judgments into social decisions. (2) We may interpret the results as being about the theories of social good (or the common good or general or public interest). The "inputs" reflect the (subjective or objective) good or well-being of the individual members of a society, while the outcomes are judgments of the social goodness of different social arrangements. These interpretations are potentially relevant in ethics (Seabright, 1989) as well as in welfare economics, in developing welfare indices (Fleurbaey, 2007b) and in planning theory (Johansen, 1987; Sager, 1998, 2002). (3) The results may be interpreted in the context of multiple-criteria decision-making. In this context, the "inputs" are rankings produced by the application of different, partly conflicting decision criteria (Arrow & Raynaud, 1986; Franssen, 2005; Munda, 2005; Nurmi, 2005; Nurmi & Meskanen, 2000; Patty & Penn, 2014). The various interpretations may be cross-tabulated in the following way:

		Purposes of aggregation	
		Evaluation	Decision-making
Inputs	Preferences	Welfare economics	Preference-based decisions
	Judgments	Quality evaluation	Value-based democracy
		Ethics	Multi-member courts

These alternatives do not exhaust the possible interpretations. *All* processes, rules and theories that are purported to select an alternative or several alternatives or to produce an overall ranking by using individual rankings as the starting-point may provide an interpretation of the results of social choice (Plott, 1976, 526). For example, the results can be applied to the rules used to determine the winners in athletic contests or other contests of skill (Höglund, 1991; MacKay, 1980; Saari, 2001b), to student examination procedures (Bonner, 1986, Chapter 4), expert panels, opinion polls, quality ranking (e.g. of universities, scientific journals, or wines; see Balinski & Laraki, 2010), to organizational studies (Hammond & Miller, 1985), and to various branches of economics.

4.2 The Conditions for Making Rational Collective Choices

Some theorists of democracy have simply dismissed Arrow's theorem as a mathematical curiosity (Sect. 5.1.1). Some others have seen it as a theoretically interesting problem, but doubted its practical relevance. Still others think that while it leaves the idea of democracy intact, it shows us that some possible *justifications* of democracy—and possibly some institutions based on those justifications—should be rejected. Finally, some theorists think that the theorem shows how the whole idea of democracy is misguided. The last view is almost certainly based on an over-reaction. But all those who think that democracy is still a viable idea have to focus

on some specific conditions needed in the proof, and to show that these conditions are either empirically irrelevant or normatively unfounded (or both).

The first, an "internal" response to Arrow's Theorem is that one or several conditions might, perhaps, be slightly relaxed so that the problem disappears. The second, an "external" response is that some of the conditions might be empirically or normatively irrelevant in those contexts we are interested in, so that the condition in question may be dropped or modified. In the subsequent chapters, various interpretations of the conditions (i)–(vi) are discussed, condition by condition. Interestingly, although the proof of the Theorem is logically flawless, there is no agreement—not even among the specialists of the social choice theory—on its meaning in democratic contexts. This shows us that the problem of interpretation is philosophical rather than logical or empirical. The apparatus of the social choice theory does not itself determine its use. It does not tell us what, say, the independence or transitivity conditions would mean in the real world.

4.2.1   Non-dictatorship and Anonymity

The *non-dictatorship condition* seems to be the least controversial of all the conditions, at least in democratic contexts. However, at least one author has challenged the reasonableness of this condition. Keith Dowding (1997; but see also Little, 1952/1973 and Brennan & Hamlin, 2000, 109–110) has remarked that the notion of "dictatorship" used in the proof does not imply that an individual designated as the dictator actually has a *causal or normative power* to determine the outcome. This is certainly true. Consider the interpretation of the theorem in which voters are replaced by different ranking criteria. A criterion can be "dictatorial" in a metaphoric sense only, but the formalism remains the same. In the Arrowian context "dictatorship" simply means that decisions or collective orderings are, for some reason, invariably in accordance with some particular individual ordering. Dowding thinks that most people who have struggled with the implications of Arrow's result have mistakenly taken "dictatorship" to mean what it usually means, that is, that there is a single person with wide causal or legal powers.

However, it does not follow that Arrowian dictatorship is a harmless property in political contexts. It is difficult to imagine a *decision-making rule* which would violate only the "technical" non-dictatorship condition while being intuitively acceptable in democratic terms. According to Dowding,

> [Arrow's Theorem] shows, that, given no restriction on preferences, there will always be an individual whose preferences are identical to the social welfare function. Translating [the Theorem] in choice-theoretic terms this means that an electoral system will always make the choice that at least one person desires. Stated thus, [the Theorem] seems unsettlingly banal. Why on earth should the social choice not be identical to the preferences of at least one person? (Dowding, 1997, 42)

Thus, Dowding thinks that non-dictatorship, when properly interpreted, says only that there is no voter whose preferences happen to be identical with the

collective outcome or ordering *in a particular case*. If Dowding were right, most social choice theorists would, consequently, be guilty of an absurd mistake. They would believe *both* that "dictatorship" means what the word is usually taken to mean *and* that the Theorem implies that all voting rules are dictatorial in this sense. According to them, there would be a hidden but real and powerful dictator in every voting system. Dowding's interpretation of the standard view must be mistaken, and it may be instructive to find its source.

The standard proof of Arrow's Theorem indeed starts from the supposition that all other conditions hold, and then proceeds to show that the non-dictatorship condition must be violated. But, of course, if the other conditions do not hold, the dictatorial conclusion does not follow. And typically they do not hold. For, as we shall see (Sect. 4.3.1), most voting rules violate at least the independence condition. As Dowding says, some voting systems indeed "make a choice that at least one person desires"—that is, desires more than any other outcome. This is true of the plurality, plurality runoff, or alternative vote systems. (However, it is *not* true of rules satisfying the Condorcet or Borda criteria.) Most voting rules make such choices just because they violate Arrow's independence condition which restricts the information used in collective choices to pairwise comparisons. Contrary to what Dowding says, in voting contexts the role of the non-dictatorship condition seems to be just what it is usually supposed to be: it excludes the possibility that the preferences of one single individual *always* correspond with the collective ordering. Although Arrow's conditions do not use the notion of causal power (which is a stronger notion than mere correspondence), there is no democratic way to violate the Arrowian non-dictatorship condition in real voting contexts. We could imagine a case in which an individual voter is a "dictator" in the correspondence sense without being one in the causal sense. Suppose, for example, that the actual choices are determined by an external but in principle predictable mechanism which has nothing to do with voters' preferences. Suppose further that an individual *a* is always able to predict the outcomes and, being a Stoic, she always accepts the inevitable. Then, the choices would always *correspond* with *a*'s preferences, although she would be without any causal influence. However, this causally in-effective form of "dictatorship" would be as incompatible with the principles of democracy as a "real", causally effective dictatorship.

As a factual condition, the non-dictatorship condition undeniably holds in most decision-making systems. To quote Schwartz (1986, 118): "The conditions are so mild, indeed, that the worst tyrannies in history never came close to violating them. Could Hitler have gotten his way on *all* possible choices in *all* possible situations in which literally *all* Germans—the entire armed forces, government, and the Nazi Party—opposed him?" The mildness of the condition is shown by the fact that among a triumvirate of, say, Caesar, Pompey, and Crassus, Arrow's result still holds. If they disagree, they may produce a cycle among themselves. Even if Caesar had had more power than the two other triumvirs had, the Theorem would still be relevant as long as the other two had had some power. Indeed, in democratic theory, we would like to have much more than non-dictatorship. We would like to have something like May's anonymity condition. In *evaluative* contexts, "dictatorship"

means that one single criterion is always decisive—and that may sometimes make sense. In voting contexts, however, the non-dictatorship condition is certainly a minimal requirement—it cannot be further relaxed.

4.2.2   The Pareto Condition

Especially in economic contexts, the *Pareto* or *unanimity* condition is often taken as self-evident. If the notion of "preference" is interpreted in an all-encompassing way—so that it includes *all* possible reasons to choose one option rather than another—it is difficult to see how it could be challenged (Ng, 1979, 31). This can be illustrated by the following observation. The locution "although we all prefer *a* to *b*, *b* should nevertheless be chosen" seems to imply a pragmatic contradiction: if the speaker is included into "us all", she seems to contradict herself.[3] However, if we do *not* all treat constitutional, procedural or normative judgments—for example, the judgment on whether the Pareto principle itself is an acceptable principle or not—as mere preferences, or preferences of the first order, it is not absurd to express a judgment of higher order which might override the speaker's own (first-order) preferences. As a genuinely normative principle, the Pareto principle is *prima facie* appealing, because it seems to be a minimal common element shared by different normative views. First, most utilitarians—but not only them—think the good of a society must be solely a function of the good of its members. If at least one person is better off and no one else is harmed, the society as a whole must be better off.[4] Even if we reject the stronger utilitarian requirement of interpersonal comparability of utilities, the Pareto principle seems to remain as "the reasonable core" of the doctrine.[5] Second, contract theorists argue that valid norms must be derivable from a hypothetical contract. Hypothetical contractors can only agree on norms which are acceptable to all. Such norms must be Pareto-optimal. Third, the Pareto principle is often seen as a consequence of the Kantian principle of individual autonomy. Because "all participants would by definition consent to a transaction which left them better off", "a moral analysis based on autonomy and consent would approve the transactions that were Pareto superior" (Bix, 2009, 206).

However, in spite of the apparent consensus there are several reasons to doubt the universal validity of the Pareto principle. First, the principle cannot

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[3] It is sometimes argued that a rejection of the universal validity of the Pareto principle must be based on paternalism. The implicit presupposition must be that "paternalistic" choices violating the principle are based on something other than citizens' preferences.

[4] Cf. John Austin (1832/1995, 95) "When I speak of the public good, or the general good, I mean the aggregate enjoyments of the single or individual persons who compose that public or general to which my attention is directed. (...) In case the good of those persons considered singly or individually were sacrificed to the good of those persons considered collectively or as a whole, the general good would be destroyed in the sacrifice."

[5] See Hardin (1988), Chapter 5.

automatically be equated with *expressed* unanimous consent. Consider a situation in which the unanimity rule is used, and all the voters actually oppose some proposal. Suppose that the exercise of the veto right has some personal costs. No one is willing to exercise her veto, and the proposal passes "unanimously" (Brennan & Lomasky, 1984). Second, in spite of its apparently minimal nature the Pareto principle may actually conflict with equally plausible normative principles. Amartya Sen (1970) has famously shown that in some situations the Pareto principle is incompatible with the existence of individual rights. In Sen's result, the impossibility is produced by the simultaneous use of the Pareto principle, the universal domain condition and a non-aggregative principle, namely the *liberal principle* that at least some issues are left to individuals to decide. The nature of the problem of liberal rights could be illustrated by Sen's own (marvellously outdated) example. In that example the choice is between alternatives involving citizens A and B reading or not reading D. H. Lawrence's famous novel *Lady Chatterley's Lover*, once considered as an indecent book. Prudish citizen A prefers most that neither he nor B would read Lawrence's sexually explicit novel (the outcome is then No, No, or NN) next that he rather than B reads it (Yes, No, or YN) and last that only B (NY) or both A and B (YY) would read it. Citizen B, the libertine, thinks that they both should read the book, but, above all, A should widen his narrow world-view by reading it. The preference orderings are then NN > YN > NY > YY for A and YY > YN > NY > NN for B. Suppose that A and B are living in a (minimally) liberal society. Both have the right to decide whether they read the book or not, while neither has any control over the reading habits of the other. In a society respecting individual rights, A's right not to read a book he hates leads to the social preference NN > YN while B's right to read a book he likes generates the social preference NY > NN. But, as we saw, both A and B prefer YN to NY. Thus, the universal domain condition, the liberal principle and the Pareto principle, when taken together, produce the cycle NY > NN > YN > NY. Some critics have argued that Sen's formulation does not capture the real nature of individual right. Having a right implies an ability to *control*; it cannot be represented just as a correspondence between preferences and outcomes. This problem is actually related to the critique of the non-dictatorship condition made above (Sect. 4.2.1): the set-theoretical apparatus does not capture all aspects of choice and power. Sen's (2002, 386) reply is that in the context of an *impossibility result*, the difference between "control" and "correspondence" does not matter, for the former is a stronger notion and implies the latter. If someone is able to control outcomes, she is, in effect, able to ensure that they correspond with her preferences or interests.

How surprising is Sen's result? It has always been known that collective aggregation-principles like unlimited utilitarianism or unlimited majority rule may conflict with individual rights. Sen's result is important because it helps to locate the exact source of these well-known normative conflicts. The harmless-looking Pareto principle implied both by utilitarianism and by majority rule is already incompatible with general rights; the aggregative principles like utility-maximization or the majority principle are not needed to generate the conflict. Sen's own solution to his problem is, roughly, that "meddlesome", non-liberal

preferences like those exhibited by *A* and *B* in his own example should not be counted. Hence the domain is limited. This solution is in line with the liberal tradition extending from J. S. Mill to Ronald Dworkin. As contrast, the solution provided by convinced utilitarians like Ng (1985) or Kaplow and Shavell (2002) is to reject *all* non-preference-based principles (including rights), and to use utility maximization as the sole standard of decision-making. Non-preference based principles like rights may be used only as rules of thumb when more exact utility information is not available. Further, libertarian thinkers like Nozick (1974, 165–166), Rowley and Peacock (1977), Yeager (1978) and Sugden (1993) have solved Sen's problem by rejecting the Pareto principle or by limiting its applicability.

Finally, authors like Brian Barry (1986) and Russell Hardin (1988) argue that the genuinely liberal solution to sub-optimality problems is that *A* and *B* should be free to make a *contract* of not exercising their rights. This argument becomes clearer when Sen's *Lady Chatterley* example is modified so that it can be depicted in a matrix:

Example 4.3

		B reads	
		Yes	No
A reads	Yes	YY	YN
	No	NY	NN

In this setting, Sen's liberalism condition says that *A* has a right to choose a row and *B* has a right to choose a column. This reformulation does not remove the conflict between liberalism and Pareto. Given the meddlesome preferences of the choosers, the combined outcome of independent individual choices is that only *B* should read the book. As in the initial example, *both* individuals unanimously prefer YN to NY. However, the reformulation suggests a way out: *A* and *B* should make a binding contract in which B agrees not to read the book on the condition that A reads it. Hence, the conflict between rights and the principle are not relevant, unless the rights in question are considered as inalienable.

The contract-based solution to Sen's problem raises several issues. Sen himself (2002, 404–405) has argued that the relevant contracts would be difficult to enforce. (Given the preferences, the matrix in Example 4.3 is actually the standard Prisoner's Dilemma matrix.) Further, if they *could* be enforced, the consequences might look rather illiberal. In order to ensure that *A* and *B* honour the contract, there should be some kind of mechanism constantly monitoring their reading-habits. We may ask whether the principle of freedom really implies that people should be free to renounce their most fundamental rights. We may, for example, argue—with Locke, Montesquieu, Rousseau, Kant, Mill, and Isaiah Berlin, but *contra* Grotius, Hobbes and Nozick—that people cannot have a right to sell themselves into slavery. If there is such a prohibition or inability, it should be imposed even against the will of the prospective slaves (cf. the liberal judgment of Rowley & Peacock, 1977, 83). Sen's critics have replied that the possible enforcement problems or inalienability issues are "outside the model and therefore do not speak against

offering [the contract] solution as a *prima facie* recommendation" (Risse, 2001, 188).

However, there are further considerations. First, when there are many agents involved in an *n*-person problem, transaction costs may prevent Pareto-efficient agreements. Technically Sen's problem can be seen as an externality problem. The standard solution would then be that if a Pareto-efficient norm cannot be produced by a voluntary contract it should be imposed by a central authority. *That* solution would certainly be illiberal. There are, of course, several traditional arguments against such centralized solutions: the central authorities may be inefficient and they may misuse their power. But, again, these arguments are, just like Sen's arguments against the contract-based solution, "outside the model". Second, the contract-based solution cannot be generalized to all *n*-agent cases. Consider the following example. There are three individuals. X has the right to choose from the set {*a*,*b*}, Y from the set {*c*,*d*} and Z from the set {*e*,*f*}. Suppose that the preferences of individuals are the following.

Example 4.4

X	Y	Z
f	*f*	*d*
a	*a*	*e*
b	*b*	*b*
c	*c*	*c*
d	*d*	*f*
e	*e*	*a*

Rights generate the collective preferences $a > b$, $c > d$ and $e > f$, while the Pareto principle brings about the collective preferences $b > c$, $d > e$ and $f > a$. As in the Example 4.5, the two principles, when taken together, form a cycle. However, no mutually beneficial exchanges are possible (Risse, 2001 189–190).

Third, Yew-Kwang Ng (1985) has shown that the conflict between the Pareto principle and non-preference based considerations is not constricted to the context of rights. To see this, consider the following example. Suppose that in a society consisting of A and B we use *any* two decision-making principles so that (1) if one alternative is unanimously regarded as better than another, it should be chosen, but (2) if there is no unanimous preference, some preference-independent criterion is used. For example, if there are several Pareto-incomparable options, the option regarded as better for the environment is to be preferred. The preferences of A and B are as follows:

Example 4.5

A	B
a	*c*
d	*b*
c	*a*
b	*d*

A and B agree on the pairs {*a,d*} and {*c,b*}. Suppose that in terms of the non-preference-based environmentalist ordering principle, alternative *b* is better than *a*, and alternative *d* is better than *c*. Thus the environmentalist principle does not provide a complete ordering but gives some leeway for citizens' preferences. The simultaneous use of the environmentalist principle and the Pareto principle produces a cycle as in Sen's example: $c > b > a > d > c$ (Ng, 1985, 441–445). The general lesson seems to be that the Pareto principle is incompatible with *any* non-preference-based principle, unless the two principles are lexicographically ordered.[6] In many cases, there is no obvious contract-based solution. Sen himself advocates the use of criteria related to the fairness of decision-making processes. In Sen's terminology, this amounts to rejecting the *welfarist* aspect of social choice. Sen's technical "welfarism" is implied by the combination of weak neutrality, unanimity (weak Pareto), and (one aspect of) the independence condition: together these conditions exclude all information not related to individual preferences or utilities. These conditions ensure that all the alternatives are treated in the same way, irrespective of their history or of substantive considerations.[7] To conclude, Sen's argument seems to show that even the unanimity principle or (weak) Pareto principle is not universally applicable.

Sen's conclusion seems to follow if the social choice results are interpreted in the context of social good or general welfare. The argument cannot, however, automatically be generalized to *voting* contexts. In the context of electoral choice, something like Sen's formal welfarism is a quite plausible requirement, for there the "welfarist" combination of anonymity, weak neutrality, unanimity and independence ensures equality between voters as well as between candidates. In other words, "welfarism" guarantees that if a group of voters is able to determine the choice between candidates *a* and *b*, it is also able to determine the choice between *c* and *d*. This is at least a *prima facie* attractive property of a voting rule. The primary task of voting rules is to distribute power, and in democracies they should distribute it in an equitable way. Therefore, voting rules are purported to operate with limited information only. The early history of voting rules (Sect. 2.1.1) shows how any attempt to incorporate "substantive", non-preference based aspects into

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[6] Ng does not relate his result to Sen's better-known theorem, but the underlying structure is the same. For a general result, see Kelsey (1987); for the incompatibility between the Pareto condition and certain forms of egalitarianism, see Tungodden and Vallentyne (2005).

[7] Although Sen does not need Arrow's independence condition in his proof, the Pareto principle has a similar restricting effect. One aspect of the Pareto-criterion is that two alternatives, *x* and *y*, are ranked as equally good if all individuals are indifferent as between them. This already implies that *all* other information about *x* and *y* except the preferences is irrelevant for the comparison: this is the core of welfarism. Notice, however, that Sen's definition of "welfarism" is a formal one. In a substantive sense, "welfarism is the view that nothing but welfare matters basically or ultimately for ethics; it is therefore a normative theory about the foundation of morality" (Sumner, 1996, 184). A decision-principle can be "welfarist" in the formal sense without being welfarist in the substantive sense.

voting processes gives extra power to some voters at the expense of the others.[8] In democratic contexts the Pareto condition has, then, considerable intuitive appeal. Nurmi (1987, 87) expresses a widely shared sentiment when stating that

> one would certainly be hard pressed to maintain that there is nothing wrong in a procedure that results in the choice of y even though everyone in the voting body strictly prefers x to y. As a matter of fact, one could even go as far as to argue that such a procedure is not democratic in the basic sense of the term because the choice seems to be dictated by something other than the individual preferences.

Even if the non-welfarist aspects of options are somehow taken into account, we nevertheless require a strong connection between individually held values or opinions and the outcomes of decision-making processes. Democracy is not compatible with a system of decision making *completely* detached from the aggregation of individual opinions or interests. Christiano (1993, 192) says, perhaps in a slightly more moderate vein: "In some circumstances (. . .) Pareto inferior outcomes may be the result of using democratic institutions. (. . .) This does not undermine the intrinsic fairness of the institution, but if the inefficiency is sufficiently great, we may wish to give up some fairness so as to avoid it."

The unanimity or Pareto condition can be derived from the weak monotonicity condition and the condition of *non-imposition*. Essentially, non-imposition means that for any pair {x,y}, there exists a possible distribution of preferences such that x is chosen. It is easy to see why the Pareto conditions follow from these two requirements: if x is unanimously preferred to y, the society can choose y only if preferences are ignored entirely (imposition), or the choice rule perversely chooses y because it has *less* support than x (non-monotonicity). In ethical contexts, the non-imposition condition may be problematic. In the context of electoral rules, however, non-imposition and weak monotonicity seem to be eminently reasonable requirements. In electoral context, an imposed outcome could mean, for example, that the ruling party is entitled to have a certain number of representatives irrespective of the electoral results. (Of course, such systems are not unknown. The pre-democratic voting methods like the medieval *sanioritas*-rule were clearly "non-welfarist" in this sense.)

In constitutional contexts, the conflict between unanimity and rights is generally solved in favour of unanimity. According to most constitutions, a unanimous legislature may legally abolish even the basic rights. Of course, while such a decision would, according to most constitutions, be legally valid, it might, like a slavery contract, be ethically unacceptable. These remarks show both the relevance and the limits of Sen's critique of welfarism. Like the classical problem of majority tyranny, they reminds us that all decision-making rules, *including unanimity* rules,

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[8] Sen (2002, 335) admits that welfarism is "natural and proper" in voting contexts. However, even if a voting rule should be "welfarist" in the formal sense, it does not mean that the choice of a voting rule should be based on welfarist considerations in the *substantive* sense: anonymity, weak neutrality and independence are, *prima facie*, appealing because of voter equality which itself is a non-welfarist value.

are instances of what Rawls calls "imperfect procedural justice", and may produce "tyrannical" outcomes under some imaginable circumstances (cf. Fishkin, 1979).[9] To take a further example, in the context of a decision-making which may influence the welfare of future generations (or, more generally, when the set of relevant individuals may vary), the Pareto condition alone seems to produce impossibilities (Lagerspetz, 1984). To conclude, *the limits of validity of the Pareto condition are, at the same time, the limits of the democratic method.* If we are not allowed to violate individual rights or to ignore the welfare of future generations even by unanimous decisions, these issues should *a fortiori* be excluded from the domain of normal democratic decision-making.[10]

4.2.3   The Universal Domain and Restricted Domains

We saw that the possibility of a majority cycle was essential for proving the Theorem.[11] If such cycles can be ruled out for some theoretical or empirical reasons, the problem loses its relevance. The effect of the *universal domain* condition was that it allowed all preference configurations (profiles), including paradoxical ones.

The peculiar property of the preference configurations which produce the Condorcet Paradox is that every alternative in the cycle is regarded as better than all others by some voters and as worse than any other alternative by some voters. There is, so to speak, no agreement even on the nature of the disagreement. Usually, we do

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[9] Fleurbaey and Tungodden (2010) show that no distribution principle can simultaneously avoid the "tyranny of aggregation"—the utilitarian implication that a tiny gain for sufficiently many well-off justify imposing a much larger sacrifice on the worst-off—and the "tyranny of non-aggregation"—the implication of the Difference Principle that a tiny gain for the worst-off may impose a large sacrifice on arbitrarily many well-off individuals. That utilitarianism and the Difference Principle may have such consequences is well-known; the surprising new finding is that there is no middle-of-the-road principle which would satisfy the (very mild) requirements of the authors. With decision-rules, we get a somewhat analogous result. Even a strong supermajority rule may be used to tyrannize a minority, while a unanimity rule may produce a result which is perceived as tyrannical by all except one.

[10] Rowley and Peacock (1977, 38) criticize the Pareto principle because it neglects changes in preference intensities: "If preference intensities are deemed relevant, it is possible that one state might move up in the orderings of some individuals, with individual orderings otherwise unchanged, and yet that some change in preference intensities might occur, rendering that state less preferable to certain alternatives even though it was preferred in the original situation". This criticism is confused. Actually it is directed against the monotonicity/responsiveness conditions, which are not necessary for the proof of Arrow's Theorem, and against the ordinality aspect of the independence condition, which is discussed in Sect. 4.3.1. Moreover, even the Pareto condition is not necessary for proving the Theorem: it can be replaced by any condition ensuring that choices or orderings are dependent on individual preferences, or at least, that sufficiently many pairs of alternatives may change in the collective ordering (Saari, 1995, 255).

[11] This is not quite exact: a more general impossibility theorem can be proved even for two voters.

not see politics in that way. Sometimes, politics is based on consensual agreements. Sometimes there are permanent majorities and minorities. And quite often, although there is a variety of opinions, these views could at least be ordered along a single *dimension*—say, on the Right-Left dimension. In Western political systems, for example, the common supposition since the French Revolution is that the political landscape is structured like this:

Left	Centre	Centre	Right
Centre	Left	Right	Centre
Right	Right	Left	Left

Although there is no consensus or absolute majority, all agree that one of the competing platforms, namely the one supported by the Centre, is not the worst one. There exists some generally agreed dimension along which the alternatives can be assessed, each voter has a unique "best" alternative, and, for each voter, any alternative x to the right (or left) of the best is preferred to any other alternative y which lies further in that direction.[12] The technical term for the situations of the last type is "single-peakedness". This property was defined and discussed by Duncan Black in his ground-breaking article in 1948. However, over 50 years before Black, Albert Heckscher (1892) in effect introduced the same idea when analysing parliamentary decision-making.

Heckscher used the following example. Suppose that the three options under discussion are (*a*) to use 1000 crowns for a chosen purpose, (*b*) to use only 500 crowns for the same purpose, or (*c*) to use no money at all. The logically possible preference-orderings are the following:

Example 4.6 (Heckscher, 1892, 48)

Groups	Alternatives		
	The most preferred	The second-best	The least-preferred
$a > c > b$	1000	0	500
$a > b > c$	1000	500	0
$b > a > c$	500	1000	0
$b > c > a$	500	0	1000
$c > b > a$	0	500	1000
$c > a > b$	0	1000	500

Heckscher argued that in cases like this, four logically possible preference orderings out of the six have an intuitive interpretation. Ordering $a > b > c$ is the "normal radical opinion: as much as possible", while the ordering $c > b > a$ exemplifies "the normal conservative opinion: as little as possible". Orderings $b > a > c$ and $b > c > a$ are "normal versions of the moderate opinion". Orderings $a > c > b$ and

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[12] From this it follows that no voter is indifferent between two alternatives which lie on the same side of her best alternative. Consequently, an indifference class of any single voter may consist at most of three options—one to the right, another to the left of the best option.

$c > a > b$ are outliers, versions of "all or nothing"—thinking. Heckscher thought that at least in quantifiable examples like this, such orderings are "improbable", although they *might* appear in reality (ibid., 46–48). If the two anomalous voter groups (those with preferences $a > c > b$ and $c > a > b$) are not represented in the assembly, the configuration of preferences held by the four "normal" voter-groups is—to use the term coined later by Black—single-peaked. In the example, no voter thinks that proposal b (500 crowns allocated for the project) is the worst alternative. Heckscher recognized that parliamentary methods of decision-making tend to favour proposals which are taken up later.[13] The crucial question is then which proposals are voted on first. This gives some power to those whose task is to determine the voting order. If the groups are of equal size, the "moderate" proposal b is a Condorcet-winner, that is, it beats all other proposals in pairwise majority comparisons. *If* it is in the last ballot, it is accepted under both variants of parliamentary voting. This, argued Heckscher, is the rationale of the Scandinavian practice of starting the voting with the "most extreme" proposal or proposals and moving towards the center (or the moderate alternative). Given the presumption for single-peakedness, this voting order reveals the Condorcet-winner if the voters vote sincerely.

Heckscher recognized that this voting order may be experienced as unfair by groups which happen to have an "improbable" preference ordering. He also notices that the uni-dimensionality supposition behind the voting order which proceeds from the "extremes" towards the "center" is not natural in all contexts. Suppose, using his own example, that an association has to choose the colour of its flag. Different colours cannot be ordered in the same way as different amounts of money. There is no natural way to interpret the "extremity" of an alternative (p. 48). In most contexts, however, the supposition of uni-dimensionality is reasonable, and the voting order which proceeds from the extremes to the center is least likely to have distorting effects (Heckscher, 1892, 68). Heckscher noticed that the standard parliamentary practices in the countries using the elimination method are sometimes incompatible with his recommendation. For example, the rule that the *status quo* should always be in the last ballot violates it, if the *status quo* is an "extreme" alternative so that all proposed changes are on the same side of the *status quo*.

If the permissible domain of social choice can be restricted to the single-peaked preference configurations, the pair-wise majority rule satisfies all the remaining conditions of the second (stronger) version of the impossibility theorem (ii′)–(v). In other words, if there are no cycles, May's theorem *can* be generalized to cases with three or more alternatives. Moreover, a collective preference ordering may be non-cyclical even when a significant number of voters with non-single-peaked preferences are present, if they happen to cancel out each other. Universal single-peakedness is a sufficient but not a necessary condition for the existence of a stable majority; there are many other restrictions that may do the same job. If, to take an

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[13] This was proved for "the ordinary committee method"—that is, for the amendment method—by Black (1958, 40). The proof was extended to the serial method by Niemi and Rasch only in 1987 (Niemi & Rasch, 1987).

obvious example, more than a half of the voters share the same ordering, it does not matter if the remaining minority of voters has non-single-peaked preferences or not.

The notion of a "dimension" is, however, a tricky one. Sometimes people speak as if single-peakedness and non-single-peakedness were properties of individual orderings. For example, David B. Johnson (1991, 182) argues that "nontransitivity and its associated arbitrary outcome in an election process can occur only if a significant percentage of voters have multipeaked preference orderings. Multipeaked preference curves reflect an *unusual ranking of preferences, which only a few voters are likely to have*." (My emphasis.) Strictly speaking, single-peakedness is a property of *configurations* or *profiles* of preferences, not of individual preference orderings. More exactly, we can always describe a single preference ordering so that it is (vacuously) single-peaked along *some* dimension. Only when several orderings appear in the same picture, the dimensionality may become a problem. Here, Heckscher's treatment of the issue was more subtle. He clearly recognized that in examples where the alternatives are only unspecified *a*'s and *b*'s, it does not make sense to say that some of the imagined voters have "unusual preferences". At most, we could claim that the *overall configurations* depicted in (Heckscher's or Johnson's) examples were multi-peaked, and unusual in practice. [14] In order to describe some preference orderings as single-peaked or non-single-peaked (or otherwise value-restricted), we have to choose a dimension (or several dimensions) on which they are ordered. But in politics, as in physics, there are no absolute coordinates. If there is a cycle, we have no issue-neutral way of telling which voter group is "responsible" for the non-single-peakedness of the *overall* configuration—unless the cycle is produced by strategic actors. Of course, *if* we can take, say, the Left-Right dimension for granted, we may say in a particular case that an eccentric Leftist who ranks a Rightist candidate over a Centrist one has "unusual" preferences, and is in that sense, "responsible" for the cycle. The question is: why should we take this, or any other dimension, for granted? As Christian List says, the question of what issue dimension is relevant to a given democratic problem is a *normative* question. Democratic freedom seems to imply that a dimension should be taken as relevant if enough citizens take it as relevant. For example, the emergence of Green parties and later, Populists, in European political systems has added a new political dimension to the traditional Left–Right dimension. It has, in some cases, made it clearly more difficult to create stable cabinet coalitions. A traditionally oriented politician is likely see the Greens as trouble-makers who just blur "the real issues". Would we say that the emergence of the environmental dimension is a bad thing? This is, of course, a normative question. For a convinced supporter of the Greens may equally see the traditional politicians of the Right and of the Left as just trying to avoid the central issue.

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[14] Example 3.7 shows that we do not need "a significant percentage of voters" to produce a cycle. In close elections, it is enough to have some voters with "unusual" opinions. Indeed, it can be shown that if the preferences of all individuals *except one* can be arranged single-peakedly, the Arrow theorem still holds (Kelly, 1978, 85). However, when the preferences of most voters (say, three-fourths) can be ordered single-peakedly, the *a priori* probability of a cycle is very low.

Excluding new issues would clearly violate another aspect of democratic equality, namely the equal freedom to express one's opinions and to make political initiatives. That the traditional Left–Right dimension of politics is more important than the environmental dimension is based only on a contingent political consensus.

In the judgment aggregation context, voters have no preferences over several options. Instead, they make a series of dichotomous (Yes-No) judgments. Thus, the notion of single-peakedness is not directly applicable to this context. However, List (2002) has presented a similar structural condition for judgment aggregation. Instead of ordering alternatives/candidates on a "dimension" we may align *voters*. The question is whether there exists an alignment of voters from the left-most to right-most such that, for every proposition under consideration, the individuals accepting the proposition are either all to the left, or all to the right, of those rejecting it ("left" and "right" need not have any substantive interpretation in this context). This can be illustrated by an example, taken from List (2002). There are three propositions ("P", "If P then Q", "Q") and five individuals who may either accept ("Y") or reject ("N") each of the propositions:

Example 4.7

Proposition	Individuals					Majority
	A	B	C	D	E	
P	N	N	N	N	Y	N
If P then Q	Y	Y	Y	Y	N	Y
Q	Y	Y	N	N	N	N

This example, unlike the earlier paradoxical examples of judgment aggregation, satisfies the condition of *unidimensional alignment*. As in Duncan Black's single-peakedness result, the majority rule is unproblematic when this condition holds. There is a 'median voter'—voter *C* in List's example—whose judgments will be accepted in a proposition-wise majority voting. If the judgments of the median voter are internally consistent, so are the collective judgments.

4.2.4   Restricting the Domain: Institutional Restrictions

Brennan and Hamlin (2000, 106–107) challenge the reasonability of Arrow's domain condition

> [t]he requirement that all individual orderings are admissible is a prior view on the admissibility of particular individual orderings. And there is nothing to suggest that this requirement itself derives from individual preferences: even if all relevant individuals agree that certain rankings should be inadmissible, the universal domain requirement forces their admission. This requirement is simply imposed. The idea that *all* individual preferences—including those that might be thought malevolent, interfering or just plain evil—must be counted in reaching an appropriate sense of social ordering of the public interest is not one that accords with ethical standards.

Yet, the point of including various Bills of Rights in constitutions or international agreements is that basic freedoms (for example, the freedom of opinion) *should* be imposed—in the extreme case, even against the will of a near-unanimous electorate. And even if "malevolent, interfering or evil" preference orderings are disallowed, the Impossibility Theorem may be potentially relevant as long as the paradox-producing configurations are still possible. A democratic system may legitimately discount "malevolent" preferences, but it cannot just refuse to count some opinions in order to produce coherent results. The fact that the domain of ordinary decision making *is* usually constrained by some substantial restrictions (for example, by constitutional rights; see Baier, 1967/1982; Pennock, 1983, 421) need not affect the probability of the Condorcet paradox. Similarly Saward (1998, 73–74) argues that unrestricted domain is "undemocratic", for "no democracy can condone the presence of any and all preferences". The universal-domain condition does not, however, require that all possible preferences *are* present, but that a voter with preferences of any type *may* be present in the electorate and get her vote counted.

What does it mean in practice that the domain of decision-making is "restricted" and, therefore, cycles avoided? There are many possible ways to restrict the domain. (1) *Agenda rules* and similar devices may ensure that expressed preferences (votes) and resulting decisions are compatible with a non-cyclical collective preference ordering. The underlying "real" individual preferences may nevertheless be cyclical, but the cycles are not allowed to manifest themselves in a single decision. This might be ensured by (a) *excluding some options* (candidates, parties, proposals) which may enjoy potential support, or by (b) *excluding majority comparisons* between some options, for example, by supermajority requirements. Hence, the inputs are restricted by institutional means. (2) It may be that certain configurations just do not occur in practice, as a matter of contingent fact. This may hold either (a) because there is an underlying *consensus*, or (b) due to *cognitive limitations*. (3) Institutions and other socio-cultural factors (such as rational deliberation or non-rational group pressure) may *modify* the underlying "real" preferences and make the paradoxical configurations less likely. Restrictions of the types (2)–(3) ensure that there are no underlying preference cycles. Restrictions of the type (1) exclude or diminish the likelihood of a *manifest* cycle, that is, the possibility that a collective choice a made in society is actually overturned by another choice b, which is then replaced by c which is again replaced by a etc. (Goldfinger, 2004, 11–13; List, 2004, 508).

The a priori likelihood of cycles depends on the number of voters, the number of issues, and on the distribution of preferences. Consequently, *all* institutional arrangements which restrict the number of issues on the agenda do, *ceteris paribus*, diminish the likelihood of cycles (Niemi, 1983). Such restrictions need not eliminate the possibility of cycles; but a remote possibility of an anomalous result may be ignored. At the limit, when there are only two alternatives, Arrow's impossibility result is replaced by May's possibility result. For some, this provides a solution to the problem:

What conditions must a political society meet to ensure that rational discourse is the source of collective outcomes? The first condition is that aggregation machines be restricted to their zone of validity. Those zones are defined as elections when no more than two alternatives are at issue. This restriction of aggregation will unavoidably violate Arrow's condition of universal domain; for, given the logical and empirical possibilities of multiple alternatives on any issue, only an imposition (by institutions or individuals) can reduce alternatives to two. (Frohock, 1987, 154)

Hence, Arrow's Theorem seems to constitute an independent argument for a *rigid* two-party system (Douglas, 1984, 72–73; Farber & Frickey, 1991, 49; Grofman, 1993, 1557–1559; Haefele, 1971). If the socio-cultural norms of a polity do uphold a rigid two-party system, there may be no paradox-producing preference configurations in the parliament. In a way, it is a reformulation of the traditional argument that rigid two-party systems provide "clear choices" for voters. The cost of having such a system is that many people may be frustrated because their "unusual" opinions are not effectively represented. A two-party system is "stable", and "provides a clear choice for the voters"—in other words, ensures single-peakedness—only if it makes it more difficult to introduce new issues. In other words, in order to have the desired effect, a two-party system should be rigid rather than flexible. A related problem is that in a representative democracy with two disciplined parties there is a de facto triple-counting of majorities: the majority within a disciplined party represents the majority of the voters in a majority of the constituencies.

The social-choice argument for *legislative supermajorities* is rather simple. It is easy to see how, by making a legislative change more difficult, an institutional system may prevent decisions moving in cycles. To take a trivial example, if all decisions departing from the *status quo* are to be made unanimously, a core necessarily exists. Consider, next, a system in which *less* than a half of the decision-makers could be sufficient for a decision. Such a system would be in a perpetual movement. Any minority of the required size could change the content of any decision. Although simple (absolute) majority rule is more stable than the imagined sub-majority system, the Condorcet paradox shows that even a majoritarian system can move from a to b, from b to c and from c back to a. Consider then a rule requiring that more than two-thirds of decision-makers are needed for a decision. Suppose that more than 2/3 of them prefer alternative b to alternative c and that more than 2/3 prefer a to b. Then, more than 1/3 of the decision-makers must belong to both majorities, in other words, they must have the ordering $a > b > c$. If all individual preferences are transitive, it is not possible to have a further 2/3 majority preferring c to a. With three options, the two-thirds majority rule eliminates cycles. More generally, when the number of options is k, a qualified majority of $(k-1/k) + 1$ voters is required to do the job. Theoretically, cycles could, then, be avoided by tailoring the rules according to the number of options on the agenda. Alternatively, we may fix the decision-rule and somehow limit the number of options under consideration. If the decision-rule is the simple majority rule, we can avoid cycles by limiting the number of alternatives into two; if the rule is that of two-thirds, we should not allow more than three options and so on.

A similar result can be formulated in terms of political dimensions. If there is only one dimension (say, Left–Right) to be considered, decision-makers' preferences can be ordered single-peakedly, and cycles are avoided. If there are two dimensions (say, Left–Right, Protestants–Catholics), simple majority cycles are possible, but a 2/3 plus one majority requirement is, again, sufficient to prevent cycles. However, when more dimensions are added, we, again, need stronger majority requirements: with three dimensions the required rule is three-fourths plus one. If preferences and the number of alternatives are not constrained in any way (that is, Arrow's universal domain condition holds) only the unanimity rule completely removes the possibility of cycles.[15] This illustrates the fact that the price to be paid for the use of qualified majorities is a high one. To be decisive, qualified majority rules have to be non-neutral. They have to favour the *status quo*. The historical movement from qualified majorities to simple majority rule (briefly described in Sects. 2.1.1–2.1.4) is clearly connected with the general democratization process.

It may be argued that every political system does have *some* constraining mechanisms. For example, in the US elections one important constraining mechanism is the primary process, while in the French elections the number of candidates is sometimes constrained by agreements made between the parties. Pereira (2000, 78–79) lists further devices: the monopoly of parties to appoint candidates, electoral thresholds, and proportionality-restricting electoral formulas. All these institutions can be conceptualized as agenda constraining mechanisms. However, if Arrow's problem is "solved" by restricting the number of candidates or options, or comparisons between them, a normative justification should be provided. As Shugart and Taagepera (1994, 327–328) point out, in electoral contexts a restriction of the candidates to two cannot be justified on democratic grounds, because it requires the prior elimination of some alternatives that some voters may have favoured. Consider, again the basic paradox depicted in Example 3.6. The problem is "solved" if one of the alternatives involved in the cycle—a, b, or c—is omitted. But the exclusion of one of the alternatives would determine the outcome: if c is omitted, a is the majority winner *etc*. Who has the right to reformulate the agenda? If the voters themselves have the right, the cycle may reappear at the agenda level. The restriction should be made in a democratic way—which creates a regress problem. To be more precise, there are two parallel problems of regress. There is the potential *regress of justification* of agendas and of agenda-constraining institutions. Its counterpart is *explanatory* regress. As we have seen, the fact that actual polities are not in a constant cyclical movement may be partly explained in terms of institutions. But, as William Riker (1980, 445) said, institutions are no more than rules and rules are themselves the product of social decisions. Consequently, the rules are also not in equilibrium.

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[15] Thus, if we require a 99/100—majority for a decision, a cycle may emerge only if there are at least 100 alternatives and 100 voters.

4.2.5 Restricting the Domain: Deliberation and Agreement

Generally, the more dimensions there are involved in decision-making, the less likely it is that collective preferences are transitive. If the decision-makers are divided according to different, intersecting cleavages (say, economic policy, environmental questions, religion, language), it is intuitively clear that majorities (for example, those supporting a Cabinet) become more fragile. It is equally clear, however, that the preference configurations appearing in the existing democracies are *somehow* constrained, that is, not all configurations are equally probable. It is quite possible that the existing democracies do often or nearly always exhibit the required amount of unanimity. In real life, so goes the democratic argument, voters' preferences are likely to be single-peaked (or otherwise value-restricted). To quote Scott Gordon: "In any particular society there is a considerable degree of commonness of ends, so Arrow's theorem is of interest mainly to the academic theorist: for the practical work of politics, it is much less significant" (Gordon, 1980, 13; on this response, see also Baier, 1967/1982; Barber, 1984, 203–205; Pennock, 1983, 421).

Indeed, it is a conventional idea that democracy requires an "agreement on the basics". Supposing that this true, what makes the agreement possible? What increases the likelihood of the "commonness of ends"? In a seminal paper, Arthur Lupia and Mathew McCubbins (2005) concur with William Riker (1982) that institutional mechanisms cannot provide the final answer to the social choice problems. People choose institutions, and if they understand that certain institutions favour certain outcomes, the choice of institutions may, in the long run, be as unstable as the choice of particular outcomes (ibid., 585). The regress is halted only if the ultimate origin of social choice stability is *exogenous*, beyond the reach of human manipulation. Lupia and McCubbins argue that the main reason why preference cycles and complex voting strategies are rare in the real life is that our cognitive capacities are limited. The bounded nature of our rationality (Simon, 1992) constrains our individual as well as our collective choices. For example, psychologists have shown that people are normally able to consider and evaluate only 5–7 options at the same time. While in some elections there can be tens of parties and hundreds of candidates running in the same constituency, voters are able to rank only a handful of them. Hence, only a small number of possible preference orderings is likely to appear, which makes cycles less likely (cf. Grofman, 1993, 1563–1564).

The *deliberative-democratic* response to the problem is that the process of democratic deliberation itself is a non-coercive alternative to institutional agenda constraints. Unlike coercive constraints, power inequalities, sociological preconditions, or cognitive limitations, deliberation provides a *rational*, *autonomous* way to restrict the domain of the individual preference orderings and, perhaps, to produce non-paradoxical outcomes. One possible role of common discussion is to reach, if not a unanimous agreement, then at least a common conception on the nature of the disagreements. According to the theorists of deliberation, reasonable discussion has an inherent tendency to limit the domain of alternatives (Dryzek, 2000, Chapter 2;

Dryzek & List, 2003; List, 2002; Miller, 1992). It provides a democratic means to halt the agenda regress mentioned in Sect. 4.2.4. In a sense, the deliberative view and the Lupia-McCubbins view are polar opposites: while the deliberative view appeals to our potential rationality, the Lupia-McCubbins view builds on the *limits* of our rationality.

At the first stage of deliberative theorizing, this supposed tendency was interpreted as driving towards a full unanimity or consensus. The second stage of discussion begins with David Miller's path-breaking article "Deliberative Democracy and Social Choice" (1992). In that text, Miller carefully goes through all social choice challenges to democratic theorizing (Miller, 1992, 58–59, 64). According to Miller, the challenge posed by social choice can be reduced to two basic claims: there is no one single obviously fair and rational rule for preference aggregation, and virtually every rule is subject to manipulation by strategic voting. Miller begins his defence by rejecting the epistemic view of deliberation (p. 57), and by admitting the potential relevance of the aggregation problems:

> [A]lthough full consensus was the ideal guiding discussion, it would be quite unrealistic to suppose that every instance of deliberation would culminate in unanimous agreement. Votes will still have to be taken, and where voting occurs, so, potentially, will social choice problems. (Miller, 1992, 60)

Miller's solution to these problems is that deliberation is likely to transform participants' preferences so that resulting preference profiles are at least single-peaked (or otherwise value-restricted). This guarantees that at the voting stage there will always be a Condorcet-winner.

According to Miller, deliberation may transform participants' preferences in several ways. Firstly, some initial (pre-deliberative) preferences may be eliminated when people learn new empirical information (Miller, 1992, 61). Secondly, and more importantly, preferences which are narrowly self-regarding tend to be eliminated in the discussion. Consider the prediction once made by Frohlich and Oppenheimer (1978, 126): "Distributional issues always involve group preference cycles in majoritarian democracies". Cycles are bound to appear when politics is seen as a purely distributive game, and every decision-maker just tries to maximize the size of her own slice of the cake. Then there are as many dimensions as there are decision-makers. Consider a situation in which three decision-makers (let's call them X, Y and Z) have to share a sum of money by using simple majority rule. X and Y reach an agreement on sharing the spoils on a 50–50 basis. The excluded voter Z may now make a better offer—40 for her, 60 for the other—to either X or Y. If Y accepts the offer, X, who is now excluded, may make a better offer (50–50) to Z, etc. This process would go on endlessly, until halted by some external factor. This prediction is a logical consequence of the self-interest hypothesis, and in practice it is almost certainly untrue. While the evidence is somewhat insufficient, it is clear that democratic decision-making is not constantly troubled by cycles or inconsistencies. Even in directly distributive issues (pertaining to taxation, subsidies, *etc.*) there are not hundreds of proposed distributional schemes and thousands of potential distributive coalitions at the negotiation table. If distributive decisions

were purely distributive games played by self-interested individuals, this would be the case. Even when politics is basically understood as a distributive game, the game is always played by few collective actors guided by some amount of group solidarity and internal discipline. The groups playing the game may be self-interested, but, contrary to the simple self-interest postulate, they cannot be broken into collections of separate self-interested individuals. Some amount of group solidarity already diminishes the number of dimensions. An explanation based on the deliberative hypothesis is that decision-makers in majoritarian democracies are not allowed to act in a purely self-interested way, not because of coercive constraints but because of the nature of political discourse. In public discussions, the participants are not just free to express any preferences; they have to justify their preferences for others in terms that the others could potentially accept. "It's in my interests" is not such a justification in most situations.[16]

The requirement of universalism, the exclusion of openly self-interested preferences and proposals is likely to diminish the number of cycles. Incidentally, this is also Frohlich's and Oppenheimer's present view. In a more recent article, their aim is to

> demonstrate that it is possible to overcome preference cycles in the aggregation of voters' preferences by focusing on conditions involving consensus on the nature of social justice. This offers a new solution to the instability problem that bedevils the normative evaluation of democratic choice. (Frohlich & Oppenheimer, 2007, 363)

However, while purely self-interested distributive voting situations are most likely to create voting cycles, they are also, in one sense, easiest to solve. In pure distribution situations, general adherence to a universalistic norm is sufficient to establish single-peakedness. It is less clear that there exist analogous solutions, when a cycle results from competing principles or world-views rather than from self-interest. The few cycles revealed in empirical studies are not (directly) related to distributive issues.

David Miller argues that voters who have single-peaked preferences "understand the choice before them in the same way, even though they adopt different positions on the spectrum" (Miller, 1992, 63). According to Miller, the major reason for the existence of non-single-peaked preferences is that the issue under discussion amalgamates separate dimensions of choice (employment effects, economic efficiency, environmental consequences...) to which different voters attach different weights. Democratic discussion may reveal the existence of several dimensions involved in a "single" issue. Then it may be possible to split the original decision into components which may be voted on separately.[17] List (2002) makes the helpful distinctions between *substantive agreements* and *meta-agreements* on one hand, and between "semantic" and "geometrical" one-dimensionality on the other hand.

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[16] "It's in my interests" is, however, a sufficient justification when *all* decision-makers are willing to say the same, that is, when "it" is a genuine Pareto-improvement.

[17] One presupposition of this argument, not mentioned by Miller, is that the preferences over various component choices are *separable*. On this notion, see Sect. 6.2.6.

A substantive agreement is an agreement on the policies or on the truth of practically relevant propositions. Single-peaked or otherwise value-restricted preferences (List, 2002, 73–75, 77–78) may be produced by meta-agreements. One-dimensionality is a form of meta-agreement when it is based on voters' shared perceptions. To quote Riker (1982, 135), one-dimensionality "is important because it (. . .) means that voters have a common view of the political situation, although they may differ on their judgments". As List remarks, this is a case in which the "dimension" is understood and shared by the voters themselves: they agree that, say, the environmental issue is more important than economic efficiency or *vice versa*, although they may disagree on the location of various policies on the prioritized dimension. List argues that this is a significantly more modest aim than a substantive consensus, and compatible with the requirement of political pluralism. He specifies the hypothesis that deliberation may solve the social choice problems by creating a meta-agreement. (a) Group deliberation may lead people to identify a common semantic dimension in terms of which the decision problem at stake is conceptualized. (b) For a given semantic dimension (say, environment), group deliberation may lead people to agree on the position of each policy option (say, the location of a power plant) on that dimension. (c) Group deliberation may help individual to clarify their own positions. It may lead each individual to determine a most preferred position on that dimension, with decreasing preference as options are farther away from the most preferred position.

List admits that no part of his threefold hypothesis is trivial, and each of them needs empirical testing. In their criticism, Ottonelli and Porello (2013) claim that far from being a less demanding alternative to a substantive consensus, a meta-agreement is actually quite a demanding form of agreement. It requires the simultaneous truth of *all* the hypotheses (a)–(c). The truth of hypothesis (a) requires that voters ought to agree on that one pair of polar predicates (say effectiveness versus fairness) is the *only* thing that matters. Moreover, hypothesis (b) requires that voters should be able to place all the feasible options on this axis in same way. Ottonelli and Porello remark that voters' preferences may exhibit single-peakedness, or even a substantive consensus, without such a strong meta-agreement. One-dimensionality may be only a "geometrical" property constructed by an external observer. Ottonelli and Porello further claim that, because of its demandingness, a meta-agreement is actually not compatible with democratic pluralism. For one essential aspect of democratic pluralism is that it allows not only the expression of competing interests, different preference orderings, or different factual judgments but different ways to *conceptualize* issues. Consider Heckscher's example of an association choosing the color of its flag. Voters may, for example, agree that blue, yellow and green are the main contestants, and that green is not the worst choice, although some of them prefer blue while others prefer yellow. Then, they have single-peaked preferences which may be ordered along a single dimension. However, they need not to agree on the overriding relevance of any *conceptual* dimension. While the ways in which they rank the available options exhibit some uniformity, it needs not to be due to a meta-agreement.

4.2.6   The Rationality Conditions: Transitivity and Its Conceptual Relatives

If the non-dictatorship, unanimity and universal domain conditions are (tentatively) accepted, there are only two conditions left: the *transitivity* and *independence* conditions. Clearly they are less transparent than the conditions discussed above. They do not seem to have any obvious ethical meaning. Rather, they are related to rationality. Transitivity, coherence, and internal consistency are often seen as necessary conditions of rationality of *individual* valuations, preferences or choices. However, some theorists (Sen, 1995) challenge even this assumption. If the rationality of transitivity or consistency is not uncontestable at the individual level, are there not, *a fortiori*, reasons to doubt their relevancy at the collective level? Some other theorists take consistency of individual preferences as granted, but argue that it is a category mistake to ask any consistency at the collective level. James Buchanan, for example, has argued that

> the proper approach to social welfare functions appears to begin with the frank admission that such functions are social, not individual, and therefore are of a fundamentally different philosophical dimension than individual values in individualistically-oriented decision-making processes. It seems meaningless to attempt to test such choice processes for social "rationality". But if the idea of acceptable social welfare functions and of social or collective rationality is completely divorced from the decision-making processes of the group, what is there left of the Arrow analysis? (Buchanan, 1960, 81; for similar critiques, see McGann, 2006; Plott, 1976, 525; Schwartz, 1986)

Let us look the complicated notion of "social rationality" more closely. In his pioneering work, *Social Choice and Individual Values* (1951/1963), Kenneth J. Arrow gives two reasons for requiring that a social choice procedure should produce complete and transitive preference orderings. First, "some social choices should be made in any environment" (p. 118). Second, these choices should be "independent of the path to them" (p. 120). The first requirement seems to a quite plausible one, at least when we are focusing a single decision process. We do not want the social choice moving from alternative a to alternative b, from b to c and from c back to a, *etc. ad infinitum*. However, if a cycle is halted, the one who has the power to determine the voting order also has the power to determine the result—or, if the voting order is determined in advance by a rule (for example, the amendment rule, see.), this rule determines the result. In order to satisfy the first of Arrow's requirements, we thus violate the second and make the outcome dependent on the "path" through which it is reached: the voting order.

The practical importance of this observation depends, of course, on the empirical frequency of cycles and on the practical importance of the issues involved in cycles. The problem of path-dependence is, however, a more general one. For if the path which leads to a decision may determine the outcome when the preferences are cyclical, it may sometimes determine outcomes even in the absence of cycles. Many people are likely to think that this is undemocratic. This criticism is not applicable at the individual level. Even if some rationality conditions are not

necessary parts of universal rationality, they may still be required by *the institutional rationality* embodied in democracy. In my view, in institutional contexts "rationality" is conceptually related to normative notions like fairness. Consider a legal system. If courts often produce arbitrary and unpredictable decisions, this may be considered as a failure of rationality. It can equally be characterized as a violation of equality before the law. In some cases, (a particular form of) "social rationality" may be *more* demanding than individual rationality. If institutional rationality is partly a moral notion, there is nothing odd in this. It is intuitively reasonable to allow more idiosyncrasies and less predictability for an individual making purely private decisions than for individuals or institutions making public decisions. This only means that we cannot automatically apply *a fortiori* argument from individual to social rationality. Some forms of "irrationality" may be harmless (and actually not forms of irrationality) in individual contexts, but still disturbing in public contexts.

For Arrow, however, transitivity was also relevant because it was part of the programme of Welfare Economics. Full transitivity may indeed have some plausibility in the context of social good or welfare. Transitivity seems to be a part of the meaning of the relations "better than" or "as good as",[18] and if the aim of our theory is to try to evaluate various objects or states of the world according to some normative criteria, a failure of transitivity may be disturbing. However, in the context of *decision-making mechanisms*, it seems superfluous to demand that our procedures should *always* be able to rank *all* the alternatives on the agenda. Sometimes, especially when the aim of voting is to assess the merits of alternatives rather than to produce the final decision, voters are explicitly asked to provide a ranking. Sometimes—for example in multiple-member elections—the relative support of party groups or candidates establishes a ranking order between them (see Sects. 3.1.5 and 3.5.3). This order may be used as a yardstick in further decision making—for example, in allocating cabinet posts or committee memberships to parties according to their relative support, or choosing the most popular candidate as the Mayor and the next most popular as the Vice-Mayor. However, for many practical purposes it is enough to have a method which is able to pick one option or candidate as *the preferred one*. Hence, some logically possible violations of transitivity seem to be harmless. If a majority can select a as the best alternative, why would it matter if it were unable to agree on the exact ordering of the losing alternatives c, d and e? In decision-making contexts, ranking are relevant only when they are used as a basis for choices. A property weaker than transitivity seems to suffice for most electoral purposes.

Quasi-transitivity requires transitivity of the preference relation, but not of the indifference. Thus, we may say, for example, that a society strictly prefers a to c while being indifferent as regards a choice between a and b and between b and c. In the case of *individual* preferences, quasi-transitivity seems to be a common

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[18] The claim that transitivity is a part of *the meaning* of "good" and "better" is defended by Broome (1991).

phenomenon, especially when individuals are faced with long lists of rather similar options. But as an alternative to *social* transitivity, quasi-transitivity has its problems. Under quasi-transitivity, society can pick either *a* or *b* if these are the only alternatives and society is indifferent as regards choosing one or the other. But if *c* is added to the list and it is strictly worse than *a*, but not strictly worse than *b*, society has to choose *a*. This sounds arbitrary. A more important problem is that although there are choice functions that satisfy all the Arrowian conditions—including non-dictatorship—if the transitivity condition is replaced by quasi-transitivity, such functions are necessarily *oligarchic* and, hence, non-anonymous. With full transitivity, if all the other conditions are met, there has to be a dictator. With quasi-transitivity, there necessarily is a group of voters—an "oligarchy"—which can impose its unanimous preference over the preferences of the rest of the voters. And in democratic contexts, anonymity seems to follow from the general ideal of democratic equality (Sect. 2.2.1). Moreover, if we replace Arrow's transitivity condition (v) by the quasi-transitivity condition and then strengthen the theorem by adding May's *strong* monotonicity condition (condition (v′) in the extended version of the Impossibility Theorem) to the list, the dictator returns.

Can the transitivity condition still be weakened? We may simply demand that the social preference ordering produced by a rule does not exhibit cycles of *strict preference*, that is, there is no series of the form $a > b > c > \ldots > a$. This is compatible with the possibility that a society strictly prefers *a* to *b* and *b* to *c* while being indifferent as between *a* and *c*. If there are no cycles of strict preference, we say that the preference ordering is *acyclic*. Acyclicity is an even weaker condition than quasi-transitivity; indeed, it is the weakest possible condition that still preserves the idea of rationality as a way of choosing the *best* alternative, for acyclicity is the necessary and sufficient condition for making a choice from every finite subset of the set of all alternatives. However, this further weakening of the transitivity condition still requires an unequal concentration of power. For we can prove the following theorem:

The Acyclicity Theorem If a function satisfies the following conditions:

- (i″)   Universal domain
- (ii″)   Strong neutrality
- (iii″) Weak monotonicity
- (iv″) Gives a complete and acyclic ordering,

then some voter must have a *veto power* over all pairs of alternatives. In other words, some voter has a power to determine on any pair of alternatives that the collective remains indifferent as to that pair.

An actual example of a rule which produced acyclic orderings was the voting rule used by the United Nations Security Council prior to November 1965. At that time, the Council had five permanent and six nonpermanent members. All permanent members had a veto power over all motions. To be passed, a motion needed seven *affirmative* votes. In other words, at least one permanent member had to support it actively. The other four permanent members had to concur, that is, not to

exercise their veto rights. Suppose that there were three options (a, b and c) and each nation's ambassador had transitive preferences. Then, a cycle was impossible. Suppose that the resulting social ordering in the Council was $a > b > c$. It means that at least one permanent member preferred a to b, while no permanent member preferred b to a, for if there were such a member, it would have exercised its veto. Similarly, at least one permanent member (not necessarily the same one) preferred b to c, while no permanent member had the opposite preference. But then, given the transitivity of individual preferences, no permanent member had the preference $c > a$. The voting rule of the Security Council was acyclic, but hardly a democratic one. Although, by weakening the transitivity requirement in this way, we may satisfy Arrow's extremely mild non-dictatorship condition, we still violate May's anonymity condition.

However, it is possible to have an anonymous rule which satisfies conditions (ii″) and (iii″) and gives an acyclic (indeed, a quasi-transitive) ordering. It is the *Pareto-extension rule*: if two alternatives a and b have both some support, so that neither of them is unanimously preferred to the other, society is indifferent between them. Thus, the Pareto-extension rule is a version of the unanimity rule. The rule satisfies the anonymity condition, for *every* member has a veto right. The problem with the rule is that it solves no value conflicts. Under the rule, if a consultative committee is divided, all opinions are included into its final report, or if there are several competing candidates in an election, they are all elected (Sen, 1970, 69). Still another possible escape route is to limit the number of options (see Sect. 4.2.4) and use *qualified-majority rules*. It can be shown that for a given number of alternatives, it is possible to find a qualified majority rule which produces an acyclic ordering. For example, suppose that there are three options. A rule may require that an option is better than another option only if it is ranked above it by at least two-thirds of the voters; otherwise the collective is indifferent as between them. Then, the resulting collective ranking is again acyclic.

Generally, there are several trade-offs related to these solutions. By replacing the transitivity relation with either quasi-transitiveness or acyclicity, dictatorship can be avoided, but a group with veto powers emerges. These veto powers can be distributed in a more egalitarian way by making the veto group larger, but then the rule approaches the unanimity rule, leaving more and more value conflicts unsolved. A possible remedy is to limit the number of alternatives under consideration, but as remarked in Sect. 4.2.4, the nature of this limiting power becomes problematic.

We have seen that Arrow's theorem is only one among many similar results: we can weaken any of the conditions and still prove an impossibility result similar to Arrow's (see, for example, Plott, 1976 or Craven, 1992). For example, nothing seems to be gained by trying to relax the *completeness* requirement. *Prima facie*, the requirement seems to be quite strong. Is it true that, for any given alternatives x and y, we could always say whether one of them is better than the other, or whether they are equally good? In our private decision-making, incommensurability seems to be a common phenomenon. We may claim that one purpose of such institutional arrangements as the division of labour between different ministries

or parliamentary committees, or the germaneness rules limiting the number of issues included in parliamentary motions, is simply to *avoid* making certain comparisons (Shepsle, 1996, 232–233). Typically, legislators are not asked to decide whether it is more important to allow religious instruction at school than to limit carbon dioxide emissions. But limiting the completeness of social orderings does not, as such, point a way out of the problem. If the full transitivity requirement is replaced by a requirement saying that the social ordering should be transitive but not necessarily complete, and the other requirements (i)–(iv) of Arrow's Theorem are met, we only end up having an oligarchy of a slightly different type. Essentially, it is an oligarchy that has a right either to impose its unanimous preference *or* to determine some alternatives as incomparable (Weymark, 1984).

4.2.7 Path-Independence

Instead of focusing on the transitivity condition directly, we may start with the second rationale mentioned by Arrow: the decision-making process should be such that the result is independent of the "path" by which it is reached. This implies that it is possible to construct a decision-path, in other words, that the set of alternatives can be divided into subsets, the first choices are made from the subsets, and that a new choice or choices are made from the set that resulted from the previous choices. Many voting rules—for example the parliamentary rules—work in this sequential way. So do the runoff-rules. The US electoral process—general elections preceded by open primary elections—can also be viewed as a sequential elimination process. Amartya K. Sen has defined a condition that captures the essential idea. We define a *social choice function* as a function which attaches an alternative, or a set of alternatives, to sets of individual rankings. The choice process may be described as a series of choices from sets. Unlike the Arrovian social welfare functions, social choice functions do not produce full orderings among the alternatives.

A social choice function is said to possess the *property* α (or *heritage*) if the following condition holds: suppose that S is the set of all feasible options and a is the option or one of the options chosen by the function. Then a should also be chosen from any subset of S that contains a. When applied to voting rules, the property α guarantees that those who have the power over the agenda cannot turn a winning option into a losing one by deleting some of the non-winning options from the agenda. Another related requirement is that if there is a tie between the alternatives a and b in a subset of S, then either both a and b or neither of them will be among the options selected from the full set S. This is called the *property β*. If the property *β* holds, a winning option cannot turned into a losing one by introducing new, non-winning options to the agenda. If a decision-rule satisfies both of these requirements, it is said to satisfy the *weak axiom of revealed preference (WARP)* (Craven, 1992).

Full *path-independence*, introduced by Plott (1973), requires that (i) the heritage (or α) condition holds, and that (ii) if a rule selects certain options {*a,b*} as winners

from the full set of options S, the same rule will also select both a and b as winners when it is applied to a subset of S which contains both of them. Path-independence guarantees that it is not necessary to consider all the alternatives simultaneously. The set of alternatives can be divided into subsets and the choices can first be made from these subsets without changing the final choice. (Here is a simple example: if a is the absolute majority winner—that is, gets more than 50 % of the votes—in a set of candidates, a is also the absolute winner in any of the subsets.) Path-independence and other similar conditions ensure that a collective decision cannot be determined simply by manipulating the voting order and/or the alternatives on the agenda. Unlike transitivity, these properties can be defined in terms of choices from different sets of options: there is no conceptual need to postulate a general preference ordering for the entire society.[19]

Unfortunately, we have not found a way out of the Arrow paradox. First, most of the decision-making rules in common use do not satisfy the property α; hence, they cannot satisfy WARP or path-independence. Let us look again at Example 3.2:

5 voters	4 voters	3 voters
a	c	b
b	b	c
c	a	a

By applying the plurality rule to the entire set $\{a,b,c\}$ we select a as the winner. If we apply it to the subset $\{a,c\}$, c wins, and if we apply it to the subset $\{a,b\}$ we get b. In a plurality runoff between all the candidates, b is first eliminated, and c becomes the winner of the second round, but when the rule is applied to the subset $\{b,c\}$, b wins (Cf. Nurmi, 1991, 29–31). This example illustrates agenda power. Assume that a, b and c are all potential candidates and that candidates a and c are already running. In a sense, candidate b is then able to determine the outcome by deciding whether to run or not. The French parliamentary elections provide us a real-life example of this mechanism. There, a weak runoff rule is used: any candidate receiving more than 12.5 % of votes in the first round is allowed to stand for election in the second, so plurality becomes the final criterion of choice. However, besides the 12.5 % hurdle, there is another mechanism that may limit the number of candidates in the second round: strategic withdrawal. For example, although a Communist candidate may pass the 12.5 % threshold in a constituency, she may withdraw in order to help a Socialist candidate against a Gaullist, at least if the Socialists are willing to make a similar service for a Communist candidate in another constituency. Here, the subsets of the entire set are really taken into consideration, and the extreme path-dependence exhibited by the plurality rule

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[19] Nevertheless, the property α—and hence, path-independence and WARP—guarantees the acyclicity of the collective preference ordering.

becomes relevant.[20] The real interest in the rationality conditions—such as transitivity, quasi-transitivity, acyclicity, path-independence or WARP—is that they prevent certain forms of agenda manipulation (Bordes & Tideman, 1991, 182).[21]

The worst problem, however, is, that criteria like WARP or path-independence do not show a way out of the initial problem. If transitivity is replaced by path-independence, the only rules that do not require oligarchy-like concentrations of power are, again, specific forms of the unanimity rule. The property α guarantees that orderings that could be inferred from a series of choices are at least acyclical. Hence, by the Acyclicity Theorem, the rules that have the property α have to be non-anonymous; either oligarchies or veto-rules. This result is *prima facie*, highly relevant. Anonymity is central in parliamentary decision-making, while path-independence is, in voting contexts, intuitively far more plausible than the full transitivity required by Arrow. To conclude, relaxing the "rationality" postulate of the Theorem does not reveal any obvious way out of the problem. But we have certainly gained something from the unsuccessful attempts to retain rationality. For we have learned that the outcomes of a democratic decision can almost always be manipulated by manipulating the voting order and/or by manipulating the list of alternatives.[22] The role of agenda power is also emphasized by most contemporary theorists of democracy (see Barber, 1984, 181; Dahl, 1989, 112–114; Hyland, 1995, 58; Saward, 1998, 61–63). The theory of social choice shows us one reason why this power is central.

From these observations we may proceed in different directions. If we compare different voting rules in terms of their vulnerability to the path-dependence violations, we see that path-dependence can be excluded only if the domain is strongly restricted, that is, many logically possible preference configurations are excluded. We saw that if all voters agree that some of the alternatives are not the worst ones— the preferences are single-peaked—there is no majority cycle. Then, the rules which satisfy the Condorcet criterion give path-independent results. *The other rules require more*. With three options, the plurality, plurality runoff and alternative voting methods satisfy the property α if and only if there is an option not ranked above the other two options by any voter. For the Borda count, the necessary and

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[20] In a horror example devised by Don Saari there are seven candidates so that candidate *a* wins all the two-candidate contests (and hence is a Condorcet winner), *b* wins all the three-candidate contests, *c* wins all the four-candidate contests *etc*.

[21] Example 3.13 shows how the Borda count is vulnerable to such manipulative tactics because it may violate the condition α. A result proved by Saari shows that *all* positional rules—plurality, Borda, modified Borda, Dabagh etc.—may violate this condition.

[22] For some authors—e.g. Bordes and Tideman (1991, 184)—this is *the* meaning of the Theorem. Some others claim that agenda manipulation may be a practical problem in assemblies but not in general elections (Radcliff, 1992, 518). But consider a possible situation in the French runoff elections. Suppose that the main potential candidates are a Gaullist, a Centrist, a Socialist, and a Communist. If they all enter an election, the Gaullist wins. If the Communist withdraws, the Socialist may win. If the Socialist withdraws, the Gaullist may still win, if some of the Socialist voters are not willing to vote for a Communist. If both the Gaullist and the Communist withdraw, the Centrist may win, etc. Of course, when elections are free, there is no single "agenda-setter".

sufficient condition is that all the voters agree on the position of at least one option. In other words, they unanimously rank one particular option as the best, or as the worst, or as the middle ground between the other two. These requirements are logically stronger than single-peakedness (Sugden, 1981, 168–171). This indicates that the most common voting rules are likely to be sensitive to the addition or the removal of non-winning options. It also gives us one possible argument for the use of rules satisfying the Condorcet criterion. For it can be shown that among all weakly neutral and anonymous rules satisfying the Pareto requirement, the Condorcet criterion (full pairwise majority comparisons) is transitive, and hence path-independent, over the *largest domain* of individual preferences. To see the point, let us glance again the Example 3.2. The preferences are single-peaked, there is a Condorcet winner, and the pairwise majority comparisons give us the collective ordering $b > c > a$. Therefore, a rule satisfying the Condorcet criterion cannot be manipulated in this situation by adding or removing non-winning alternatives. But we have just seen that other rules can be manipulated in this situation. While rules satisfying the Condorcet criterion do not produce a transitive ordering in every possible situation, they produce it *more often* than any other neutral and anonymous rule. This seems to constitute a strong argument for the use of rules that satisfy the Condorcet criterion (Dasgupta & Maskin, 2008).

There is an alternative possibility. Although transitivity, path-independence and the other similar rationality conditions may, *contra* authors like Buchanan, make sense even in collective cases, the normative argument for them is not fully conclusive. Perhaps cycling or path-dependence are not so bad after all. It may even be that the *very possibility of moving in circles is actually a part of the justification of pluralist democracy* (Buchanan, 1954/1960; McGann, 2006; Miller, 1983; Pildes & Anderson, 1990; Radcliff & Wigenbach, 2000; Schwartz, 1986, 125–131). The wider political relevance of cycles will be discussed in chapters.

4.2.8 *Justifying Path-Dependence in Judgment Aggregation Contexts?*

In judgment aggregation contexts there is no transitivity-like rationality condition. Nevertheless, an impossibility theorem similar to that of Arrow's may be proved. This seems to indicate that the critique of transitivity made by Buchanan, Plott and Schwartz is not helpful. However, *path-dependence* may be defined even for a sequence of dichotomous judgments. Consider first the systematicity requirement which says that the rejection or approval of a proposition on the agenda should depend only on the distribution of 'yea's' and 'nay's'. There may be substantive, non-formal reasons which make the rejection of this requirement less problematic in the judgment aggregation context than, say, the corresponding neutrality requirement in the context of presidential elections. In the latter case, the decision-makers vote on the *outcome* only (for example, on the election of a particular candidate).

They may discuss the reasons behind the votes, but they are not supposed to make separate collective decisions on the validity of the reasons.

In contrast, in the judgment aggregation context decision-makers are expected to form a collective judgment on reasons behind the decisions, that is, on several, interconnected propositions. Now, they may accept some of the propositions as *premises* and derive the collective judgment on the conclusions from the collectively accepted premises rather than voting directly on the outcome. Consider again Example 4.1. The three judges may first take a majority vote on the proposition (P): "Did the defendant perform the relevant act?", on the proposition (Q): "Was he culpable (that is, *compos mentis*, not acting under duress etc.)?" and on the proposition: (R) "Was the act unlawful?" Then, they may conclude that the defendant should be punished (S) without taking a separate vote on that question. Such a premise-based majority procedure satisfies all the conditions of the Judgment Aggregation Theorem except the systematicity condition. Notice that the procedure violates *both* parts of that condition. It does not satisfy part (1) of the systematicity condition because the collective judgment on the conclusion depends on the collective judgments made on the *premises*, not on the individual judgments made on the *conclusion*. Further, the premise-based procedure does not satisfy part (2) of the systematicity condition because not all propositions are treated in the same way: the premises are accepted by using the majority rule while the conclusion is accepted without a vote. Another alternative is that the judges vote only on the conclusion (S). This conclusion-based majority procedure is—at least in our simple examples with one single conclusion—just a case of ordinary majority voting with a single decision and two alternatives. Thus, it satisfies the *first* part of the systematicity condition. However, it does not satisfy completeness for the premises of the conclusion (P, Q and R) are not taken into consideration at all. The Judgment Aggregation paradox consists essentially of the fact that in some cases—as in our examples—these two procedures produce differing conclusions. In other words, the content of decisions is dependent on the *voting-path*.

List (2004) has produced some interesting results concerning the path-dependence of judgment aggregation. As the examples show, when decisions are made in a sequential order, earlier decisions may affect the later decisions, even when all the initial views of the decision-makers on each proposition are held fixed. A decision-path is defined as the order in which the propositions are considered in a sequential decision process. It may be interpreted either as a temporal order or as the order of importance or priority assigned to the propositions. In both cases, some judgments (temporally prior or those concerning more important matters) constrain the acceptance of other propositions. A decision process is *weakly* path-dependent if there are two decision paths such that a proposition P is accepted when one path is followed but not when the other is followed. A process is *strongly* path-dependent if there are two decision paths such that one path leads to the acceptance of a proposition P and another to the acceptance of its negation. List's result is the following: *There is no judgment aggregation function satisfying the requirements of universal domain, anonymity (or even non-dictatorship), completeness,*

consistency, propositionwise independence and independence of the path. (Full systematicity is not needed in this version.)

As in the standard cyclical cases, path-dependence makes the aggregation process vulnerable to agenda manipulation. Given sufficient information and computational power, an agenda setter can determine the decision path required to bring about the preferred outcome. What is important in this result is that the power to choose the voting order is—as in the standard cyclical cases—sufficient for successful manipulation.[23] Here we have another example of a discursive paradox.

Example 4.8

Individuals	Propositions		
	P	*If* P *then* Q	Q
D	*Y*	*Y*	*Y*
E	*Y*	*N*	*N*
F	*N*	*Y*	*N*
Majority	**Y**	**Y**	**N**

In this example there are three individuals and three logically connected propositions. The collective judgments, reached by majority voting, are mutually incompatible: majorities accept the premises but reject the conclusion. As we saw, the decision-makers may avoid incoherence by accepting two (any two!) of the propositions as premises, voting just on them and drawing the conclusion, instead of voting on all three. But, as we saw, this premise-based method leads to path-dependence: any of the three positions of the individuals *D*, *E* and *F* may became the position of the group, depending on which of the three propositions are treated as premises and what is taken as the conclusion. Suppose, however, that one of the propositions is taken as a *commitment*. According to the official rules or informal practices of the body, a commitment cannot be revoked, or may be revoked only by a unanimous decision or by using some other demanding procedure. For example, suppose that the group in question is a parliamentary party group which is committed to support a balanced budget (P). In the present situation, the majority—including member *F* who has voted against the commitment, but is now bound by it—considers it practically unfeasible to support a balanced budget without accepting new taxes (*if* P *then* Q). Consequently, the group is committed to accept a new tax proposal (Q), although a majority in the group opposes it. The commitment to a balanced budget forces the group to accept a particular path. The price of *not* accepting it is a loss of collective rationality/consistency. In more concrete terms: a group which is unable to commit itself may become incapable of acting as a unified actor. It does not have a "will" of its own. Other groups cannot take it as a reliable negotiation partner, because they think that the group is unable to keep its word. Moreover, if the group does not exhibit sufficient consistency, it

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[23] As is to be expected, some further analogues to the standard social choice results may be proved: For example, unanimity-rules are immune to strategic voting and to path-dependence, but they do not satisfy the completeness requirement.

cannot justify its decisions to others (e.g. to its supporters) in a satisfactory way. *Principled decision-making* requires path-dependence.

As List argues, "If there is path-dependence, a *justification* of the chosen path is crucial" (p. 511; my emphasis). In courts and similar bodies, there *are* often substantive justifications for the chosen decision paths. For example, courts are often bound by precedents. More general laws and principles may constrain less general judgments, the verdict should precede the determination of punishments, and so on. In contrast, the path-rules used in political bodies do not have similar substantive justifications. Consider the sequential decision-making methods used in parliaments. When there are more than two alternative proposals, the version of the amendment method used in anglophone countries puts the *status quo* in the last ballot. In Swedish and Finnish parliaments, the Speaker has to arrange the first voting between the alternatives that are "farthest away from each other". As Albert Heckscher noticed a long time ago, this rule presupposes an agreed dimension along which the alternatives can be arranged. The Speaker has to decide, for example, whether the Left–Right dimension rather than the environmental dimension is decisive. This decision determines the voting order and, in paradoxical cases, also the final outcome. In effect the Speaker decides whose preferences are considered as "unusual" (Sect. 4.2.3) and thereby perhaps disadvantaged by the decision "path". In contrast to the trial case, there seems to be no obvious reason why precisely this rule—rather than, say, the rule that amendments have to be considered first and the original motion after them—should be followed. More generally, the path leading to the final decision may be predetermined by a rule or a convention (as in the trial case, or when the *status quo* is in the last ballot), chosen by some agenda-setter (for example the Speaker), or determined during the process by the relative support of the alternatives voted on (as with runoff methods). In the first case the process may violate weak neutrality, in the second case it delivers some power to the agenda-setter, and in the third case it may violate weak monotonicity (Sect. 3.2.6).

4.3   The Struggle Over Independence

The remaining condition needed for the proof of Arrow's theorem is the *independence of irrelevant alternatives* (hereafter: *independence*). It requires that the social choice from a given pair of alternatives, say from {a,b}, is determined only by the decision makers' ordinal preferences between a and b. Their other preferences, for example between b and c or between c and d, may change without affecting the choice made from the original pair.

4.3.1 How to Interpret the Independence Condition: Some Mistakes

The independence condition has resulted in more criticism than any of the other Arrow conditions. To quote Hillinger (after Holler, 1982), "There have never been human beings climbing barricades to fight for a decision rule which is invulnerable to independent alternatives". This is literally true, but, of course, it is true of most of the conditions needed for Arrow's proof. Similarly, Brennan and Hamlin (2000, 108) state that "independence is a strong and essentially arbitrary normative requirement". They continue:

> The independence requirement is certainly normative in content (...) but what is its normative justification? In fact (...) most attempts at justifying the independence requirement are methodological rather than normative—concerned with analytical convenience and the wish to avoid the issue involved in the debate on the interpersonal comparability of welfare. (108)

Mackie puts it even more forcefully: "The Arrowian independence condition has no intuitive appeal, no descriptive appeal and no normative appeal".

Why is independence conceived as a strong requirement? Actually, the independence condition contains three different components. First, the choice made from a pair (or set) of alternatives is determined only by the preferences concerning *that pair* (or set), not by preferences concerning other, "irrelevant" options. Second, it is only the *ranking orders*, and not some other aspect of preferences, which determine the collective choice. Most significantly, this excludes the use of preference intensities in making collective decisions (3.3.4). Third, only *preferences*, not some other aspects of the decision-process, should be decisive.[24] I agree with Brennan and Hamlin that these requirements have a normative impact; I also agree that, ultimately, they are too demanding. I do not, however, think that they have no appeal whatsoever. Their intuitive appeal depends on the context.

Let's first eliminate some widely shared misinterpretations. It is often supposed that in voting contexts, independence is unproblematic. Kenneth Arrow himself has claimed, both in *Social Choice and Individual Values* and in several articles, that *all* the voting rules in actual practice satisfy the independence condition.[25] In *Social Choice and Individual Values*, Arrow increased the confusion by stating that the Borda count was an exception, and illustrating this by an ill-chosen example. Numerous expositors of the social choice theory have followed Arrow's presentation, and the Borda rule has acquired the undeserved reputation of being a rule

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[24] This is actually May's weak neutrality property. Strictly speaking, the neutrality aspect is derivable from the combination of independence, the domain condition and the Pareto or unanimity requirement. Fleurbaey (2007a) discusses the possible relaxations of different aspects of the independence condition in the context of social good or welfare.

[25] For example: "It is *of course obvious* that ordinary political decision-making methods satisfy this condition." (Arrow, 1967/1984, 71; my emphasis. See also Arrow, 1952/1984, 51). For an excellent critique of these misinterpretations, see Mackie (2003, Chapter 6).

which is especially prone to violate the independence condition. However, several theorists have remarked that Arrow's Borda—example actually instantiates a violation of another property discussed above (the property α or contraction consistency, see Sect. 4.2.6). From this observation, Thomas Schwartz (1986) has concluded that *all* real life rules including Borda do satisfy the independence condition. He is seconded here by such eminent social choice theorists as Georges Bordes and Nicolaus Tideman (1991), Jerry Kelly (1988), Charles Plott (1972, 1976), Robert Sugden (1981, 156), and again by Tideman in his more recent book (2006, 150–151) We have, then, a very impressive list of social choice theorists who have maintained that independence is "almost always" satisfied, and therefore unproblematic. Understandably, some critics of the whole approach have also taken this interpretation as self-evident (Pildes & Anderson, 1990, 2187).

Mackie (2003, Chapter 6) has done some excellent work in clarifying the issue. Nevertheless, it might still be methodologically instructive to try to reconstruct the usually implicit reasoning behind some of these mistaken interpretations. For example, according to Bordes and Tideman, independence means that "if the voters' preferences over the potential-but-not-actual candidates change while their preferences over the actual candidates stay the same, then the choice among the actual candidates stays the same" (1991, 168). This property, of course, *is* satisfied by all real-world voting rules, and, as Bordes and Tideman say, it ensures that "the theorem is about real-life voting rules". However, while independence excludes the influence of non-actual candidates (the truly "irrelevant alternatives"), it excludes much more.

Robert Sugden argues that because all standard voting rules are reduced to the majority rule in cases with two alternatives, and because majority rule with two alternatives satisfies independence, all generally used voting rules satisfy it. He does not, however, take into account the fact that voting rules do *not* actually reduce multi-option decisions as series of pairwise choices. In a recent article Lehtinen (2011) claims that at least the standard amendment method (unlike the Borda rule) must satisfy the independence condition for it computes the winners "by making pairwise comparisons at each stage". We have already seen why this cannot be true. Consider again the basic cyclical case:

Example 3.6

1 voter	1 voter	1 voter
a	*b*	*c*
b	*c*	*a*
c	*a*	*b*

If the three-person committee sticks only to the pairwise majority comparisons it reaches no solution. If it follows the standard amendment method, at least one pairwise comparison is omitted. Then, the result depends not only on the results of pairwise comparisons but on the voting order. Suppose that the first vote is taken between *b* and *c*. Option *b* wins, and then loses to *a*. However, if the first vote is

taken between a and b the final outcome is c. All Condorcet-efficient methods have to violate the independence requirement in cyclical situations.

Another common misinterpretation—prompted by Arrow's own misplaced example in *Social Choice and Individual Values*—confuses the independence condition with the α or β consistency-conditions (for example, Merrill, 1988). Examples which claim to illustrate a violation of the independence condition are often examples of how social choice changes when a non-winning candidate is added to or removed from the set of "actual candidates". Sometimes this interpretation is coupled with the claim that most voting rules satisfy *these* conditions (Dyke, 1981, 112). In Sect. 4.2.6 we saw, however, that this not the case. In a way, the confusion is understandable, for the independence and the consistency conditions are intuitively similar. In most cases the effects of deleting an option and lowering its position in voters' preference orderings are the same. Nevertheless, the conditions should not be equated: Independence is an *inter-profile* condition, while the consistency conditions are *intra-profile* conditions. The Independence tells, among other things, what should happen when voters' (expressed) *preferences* change while the set of options remain unchanged. The consistency conditions say what should happen when *the set of options* changes while the preferences remain constant. The difference may be illustrated by the following observation. Some procedures which go beyond ordinal comparisons (for example, Heckscher's Immanent Method, or Balinski and Laraki's Majoritarian Judgment, see Sect. 3.3.4) satisfy the consistency conditions α and β: they cannot be manipulated by adding or removing non-winning options. However, when they are used, the choice does not depend on ordinal preferences, but also on the distances between an option and the voters' optimal points. The latter may actually be unavailable; in other words, there is no perfect alternative in the list of options. Hence, these rules cannot satisfy Arrow's condition of independence of irrelevant alternatives. (For this reason, they are also vulnerable to strategic voting.)

The conceptual mistakes discussed above are not politically harmless. According to a widespread interpretation, the true meaning of Arrow's theorem and of similar results is that "democracy is impossible". This interpretation is often based on the supposition that the domain, Pareto, *and* independence conditions are automatically satisfied by the real-life democratic procedures. The only alternative for non-transitivity would then be a dictatorial rule; as Dahl once said (1956, 42) "any method for making social decisions that insures transitivity in the decisions must necessarily be either dictated by one person or imposed against the preferences of every individual". This kind of view is still common. According to many authors commenting on the Theorem, the main problem is the "incoherence" or "illogicality" of simple majority rule, "the choice between dictatorship and democratic chaos" (Mashaw, 1989, 127), between "dictatorship and irrationality" (Härd, 1999, 13) or "absolutism and chaos" (van Mill, 2006, 5). Shepsle and Bonchek present a more detailed version of this interpretation:

> *There is, in social life, a tradeoff between social rationality and the concentration of power.* Social organizations that concentrate power provide for the prospect of social coherence— the dictator knows her own mind and can act rationally in pursuit of whatever it is she

prefers.(. . .) Though [social organizations in which power is dispersed] may appear fairer and more democratic to the person in the street, they may also be more likely to be tongue-tied or inconsistent in ordering the alternatives under consideration. (. . .) Short of actually *eliminating* one of the fairness conditions—for example, by permitting dictators—the Arrow result does not evaporate. (. . .) It is nearly impossible to arrange for the making of fair and coherent group choices. (Shepsle & Bonchek, 1997, 67–69, 166; emphasis in the original)

Against these arguments we may place our common sense. On the one hand, non-dictatorial organizations *are* often able to act in a consistent and non-arbitrary way. According to historical experience, it is simply not true that social rationality invariably requires dictatorship or at least a strong concentration of power. On the other hand, democratic organizations may sometimes behave in an inconsistent way, but so may dictatorships. The real-life dictatorships have not exactly been paragons of social rationality. It seems that just the opposite is true. Consider the real-life dictatorships of the twentieth century which, arguably, brought the concentration of power to its perfection: Hitler's Germany, Stalin's Soviet Union, Mao's China, Saddam's Iraq and so on. Is there *any* sense in which these regimes might be called "more rational" than modern democracies?

We have already seen that there is one simple explanation for the confusion. Shepsle's and Bonchek's way of formulating the problem of social choice follows naturally from the widespread and often implicit belief (shared, as we have seen, by Arrow himself) that all Arrow's conditions except the transitivity/rationality requirement are normally satisfied in democratic decision-making, and, hence, the inevitable manifestation of the impossibility problem has to be an "irrational" cyclical movement between the possible outcomes. However, we have seen that this is a misunderstanding. The existing democratic rules do not satisfy Arrow's independence condition; thus the standard way of presenting the problem is simply misleading. Indeed, it has to be. For, in the real world, we are *not* constantly facing a choice between "dictatorship and chaos". The existing democratic systems, however defective, are neither dictatorial nor chaotic. If the independence condition is neither unproblematic nor universally satisfied, we need not to face this terrifying choice. The opposite interpretation, exemplified by the quotes from Brennan, Hamlin and Mackie, frees us from this predicament. If Arrow's independence condition is actually arbitrary and unjustified, we lose nothing by giving it up. I partly concur with this opinion: the independence condition is, indeed, impossible to satisfy in all conditions. At the same time, the condition does have *some* normative support; hence, we are faced with a genuine trade-offs between different intuitively plausible requirements, although *not* the dramatic choice between dictatorship and chaos.

In order to understand the real rationale behind the independence condition in voting contexts, let us recall the early history of voting rules presented in Sect. 2.1. The medieval Church and the early secular representative bodies had difficulties in accepting the authority of the purely numerical principle of majority. For centuries, they made unsuccessful attempts to find a qualitative decision-rule that would be both non-mechanical and non-arbitrary. The problem was that all such rules were

ambiguous and ultimately transferred the power to those (like the Pope) whose task was to decide when the qualitative criteria were fulfilled. Finally, the Church Councils and the Popes had to accept the principle, formulated by Gregory X: '*non zeli ad zelum, nec meriti ad meritum, sed solum numeri ad numerum fiat collatio*'—'not motives to motives, or merits to merits, but solely numbers to numbers are to be compared'. This papal decree is interesting, because it formulates a principle that underlies almost all modern decision rules, especially but not exclusively the democratic ones. The only thing that should matter is the *numerical support* of alternative policies or candidates. The only inputs of the decision process are votes, and the process computes them in a mechanical way, producing a single, unambiguous decision as its output. If we feed in the same input again, we should get the same result.

   To put it in slightly different terms, if a certain proportion of voters is able to bring about a situation in which candidate x rather than candidate y is elected, the same number of voters, using the same procedure, should also be able to bring about a situation in which candidate z rather than candidate w is elected. The distribution of support between other candidates is irrelevant; what should matter is respective support of those two candidates. The independence condition ensures this. When combined with the anonymity condition (which can be seen as a consequence of the equality of voters implicit in the decree issued by Gregory X) the independence condition forces us to use pairwise majority comparisons only, and, in the case of more than two candidates, to apply the Condorcet criterion.[26] In this sense, the Condorcet criterion can be seen as a natural extension of the most popular "mechanical" decision-rule, the majority principle. With two alternatives only, the use of the majority principle ensures that "only numbers are compared". With more options and no first preference majority, the natural thing to do is preserve this property by transforming the problem into a series of majority choices. As Christian List and Philip Pettit (2004, 227) say, the conjunction of the anonymity and independence condition "entails that the collective judgment on a proposition must depend exclusively on the number of individuals accepting that proposition, and the number of individual rejecting it". If a rule is a voting rule in the modern sense, it seems that *something* like the independence condition is needed. Without such a condition, any non-dictatorial way of choosing among the Pareto-optimal candidates or options would satisfy the rest of the Arrovian requirements. If want to define a reasonable voting system we need a condition which requires, (a) that there is a regular and predictable condition between individual rankings (or choices) and the final outcomes, and (b) that, at the same time, other considerations and random

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[26] Gordon Tullock got it right in *The Calculus of Consent* (Buchanan & Tullock, 1962, 334): "Arrow's insistence on 'independency of irrelevant alternatives' eliminates all methods of voting except that used in his proof". This link between the Condorcet criterion and the independence requirement is not always understood. To pick a random example, Stearns (1994) claims that the voting method used in the US Supreme Court satisfies the independence postulate but does not necessarily choose Condorcet-winning alternatives. For a systematic treatment of the connection, see the writings of Saari (2001a, 2001b, 2008).

effects are excluded. In this sense, Arrow's initial defence of his independence condition was not entirely misguided—although he erroneously believed that actual voting rules would satisfy it.

These observations explain several things. They explain why collective decision-making is a more natural domain of application of the Arrowian social choice theory than the theory of welfare or ethics. There is no obvious reason why a conception of social good should be based on pairwise comparisons, or more generally, why it should be based on any mechanical procedure at all. But, since the times of Pope Gregory, voting *has* been seen as a purely mechanical procedure. The supposed virtues of voting are connected to the very idea that it can be done in a purely mechanical way, without qualitative considerations like the *maior et sanior pars*—doctrine. The majority rule was adopted in order to preclude the choice between "dictatorship" and "chaos". We have seen how the *maior et sanior pars*—doctrine led to "chaos" when there was no agreement on how the wiser group was to be identified. It led to a "dictatorship" when this determination was left to the Pope or a King. The requirement that decision-making should be based on numerical comparisons follows from the requirement of equality.

As we saw, the majority principle may in some cases produce cycles. The reason why most voting rules cannot produce cyclical results is precisely that they do *not* satisfy the independence condition: the outcomes do not result from pairwise comparisons. (For the same reason, these rules do not necessarily choose Condorcet winners even when these exist.) Indeed, there is no real-life interpretation of a function which would satisfy the independence condition in *all* circumstances, for the rules generally based on pairwise comparisons (as the parliamentary amendment rule) *must* violate it—at least in the cyclical cases. Hence, one possible way to formulate the Arrovian problem in voting contexts is the following:

> A good voting method should establish a reasonable, purely mechanical, connection between the distribution of individual opinions and the collective choice. Hence, *something* like independence is needed. But no real-life method can satisfy independence in all possible cases. And there is no simple way to weaken the requirement.

4.3.2   Manipulability

We have seen that the claim that almost all voting rules have the independence property is simply untrue. On the contrary, all voting rules violate it. But some of them violate it more often than others. For example, simulation experiments have confirmed that the plurality rule really violates the independence postulate more often than other rules in general use.[27] This is conceptually related to its strong

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[27] In a simulation experiment, the plurality rule was found to violate the independence condition in 19 % of the cases. The other percentages were: 10 for the plurality runoff, 9 for the approval voting, 7 for the Borda count and 6 for the alternative vote (Merrill, 1988, 98).

tendency to reject Condorcet winners. Thus, some of the most controversial properties of the plurality rule and of the plurality runoff discussed above (Sects. 3.2.3 and 3.2.4) are actually related to their strong tendency to violate the independence condition, and these properties have sparked off the discussion on alternative voting rules such as proportional representation (Sect. 3.5). Unlike Hillinger, we may well imagine people "climbing the barricades" because of the tendency of an electoral rule to produce arbitrary results.

The role of the independence condition becomes more visible when we realize that one consequence of not honoring it is that decision rules become *manipulable* by strategic (or sophisticated) voting. We saw how the main problem with the direct attempts to measure preference intensities (thus disregarding one aspect of the independence requirement) was that all plausible-looking devices of measurement were sensitive to strategic behavior.[28] This property, however, is not restricted to the voting schemes discussed in Sects. 3.3.2–3.3.5. The choice functions discussed in the literature on social choice take individual preferences as their inputs, and produce choices or orderings as their outputs. The real-life voting rules, however, do not operate with preferences but with *votes*. Votes may be interpreted as more or less faithful expressions of individual preferences, but are not themselves preferences. I have defended the view that a vote is primarily a power resource, not a statement or a measurement unit. Because of the power aspect of voting (Sect. 3.3.5), elections are taken seriously; and this unavoidably provides incentives *both* for rational deliberation *and* for strategic behaviour. This does not, however, mean that there are no normative problems related to strategic behaviour in democratic elections. A realistic aim is to *minimize* the role of *certain forms* of strategic behaviour.

Let us start by taking a particularly dramatic real-life example of vote manipulation. When the Parliament of the autonomous Grand Duchy of Finland assembled in 9th November 1917 the situation in the country was extremely tense. In nearby Petrograd, the Bolsheviks had assumed power. While the Finnish Conservatives and moderates were temporarily willing to recognize Kerensky's Provisional Government as the legitimate successor of the Czar—and hence as the sovereign ruler in Finland— no-one was willing to accept Lenin and the Bolsheviks in that role. Unfortunately, there was no agreement on where the supreme power should be placed. The Conservatives wanted the parliament to elect a *Regency* government in order to prepare way for a Finnish monarchy. The Agrarians and other republicans at the Centre supported the *Enabling Act* which would make the Finnish Parliament sovereign. The Social Democratic parliamentary group was, in principle, willing to support the republicans in this, but the radical Workers' Councils, formed according to the model of the revolutionary Russia, had more far-reaching aims. These radical groups were putting heavy pressure on the party group. To please them, the Social Democratic

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[28] "The more fine-graded information the aggregation admits, the more it is prone to problems of interpersonal comparability and to manipulation" (Risse, 2004, 59).

parliamentary group accepted a radical resolution called *Me vaadimme* ('We demand'). Hence, in the fateful voting, there were three competing proposals.

The Speaker of *Eduskunta* ruled that the Parliament would first choose between *Me vaadimme*, supported only by the 90 Social Democratic MP's, and the Enabling Act, put forth by the 58 Agrarians and other republicans. Following the amendment procedure, the winner would then be put up against the regency proposal which was the first choice of the 48 Conservative members only. (This voting order seems to violate the normal practice followed in the Scandinavian parliaments that the most extreme proposals should be in the first ballot.) The preferences were as follows:

Example 4.9

SOC. DEM. (90)	AGR. & REP. (58)	CONS. (48)
Me vaadimme	Enabling Act	Regency
Enabling Act	Regency	Enabling Act
Regency	*Me vaadimme*	*Me vaadimme*

The Enabling Act was a Condorcet winner; with a straight vote, it would win. To avoid this, the Conservatives voted strategically. In the first ballot they supported the Social Democratic motion *Me vaadimme* against the Enabling act. The former won 135 votes to 58. In the next ballot, the Agrarians and other republicans had no choice but to support the Regency alternative, which was passed by 106 votes to 90. The Social Democratic MP's were embittered; the radicals went on the streets. Within three months, the country was in a civil war.[29] Although people were not mounting the barricades "to fight for a decision rule which is invulnerable to independent alternatives", vote manipulation was one crucial link in the chain of events which made them literally mount the barricades.

We say that a decision-making rule is manipulable if, given a set of alternatives and the preferences of other voters, an individual voter or a group of voters can get a better result (from their point of view) by not voting according to their true preferences. Hence, we say that a rule is *non-manipulable* if such a situation cannot occur. A general result says that *a decision-making rule is non-manipulable if and only if it satisfies the conditions of weak monotonicity and independence*. Suppose that, in a set of alternatives {*a*,*b*}, a voter prefers *a* to *b*. What rational motives might the voter have to vote against his/her real preference? First, suppose that by voting for his/her favourite alternative, she may actually *weaken* its chances. Weak monotonicity requires that if an alternative moves upwards in individual preferences, its chances are not weakened. The relationship between the weak monotonicity and the non-manipulability of decision-making rules is clear: for example, if some voters want a candidate to be elected, they cannot help the candidate by voting for somebody else. As we have seen, some voting rules are not weakly monotonic. In the following example, the rule used is plurality runoff:

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[29] This narrative is based on Upton (1981, 142–143). I am grateful to George Maude for drawing my attention to the example.

Example 4.10

31 voters	29 voters	40 voters
a	*c*	*b*
b	*a*	*a*
c	*b*	*c*

If all the voters vote according to their preferences, *c* is eliminated and the runoff takes place between *a* and *b*, and *a* wins. Now, suppose that three of those 40 voters whose preferences are $b > a > c$ vote for *c*, their worst alternative, in the first round. Then *a* is eliminated and *b* survives as the winner of the runoff. Here, this rule is manipulable because of the lack of monotonicity. We can formulate a Machiavellian rule of thumb for voters in the plurality runoff: those who are sure that their favourite will be in the second round should give their "surplus" votes for the weakest possible contestant (for a real-life example of the application of this stratagem, see Sect. 7.2).

Second, a voter may have another rational motive to vote against her true preference: her choice between *a* and *b* may have an effect on the fate of *other* options. Arrow's independence condition ensures that the social choice from a set depends only on the ordinal preferences between the members of that set. Without independence, one might be able to change the choice from the set {*a*,*b*} by misrepresenting one's preferences involving other options, or by providing some other misleading information (for example about preference intensities).

In the following impossibility theorem Arrow's independence condition is replaced with non-manipulability:

The Manipulability Theorem (Craven, 1992, 73) With more than two alternatives, there is no function which satisfies the following conditions:

- (i) Universal domain
- (ii) Pareto
- (iii) Non-dictatorship
- (iv) Non-manipulability
- (v) Complete and transitive ordering

Given the close connection between the independence condition and manipulation, the theorem is an obvious consequence of Arrow's result. There are other interesting results related to the manipulability of voting systems,[30] of which the following one is especially pertinent:

Gärdenfors's Theorem There is no function that satisfies the following conditions:

- (i) Anonymity
- (ii) Weak neutrality

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[30] The best known of all the manipulability results is the Gibbard-Satterthwaite theorem. I have chosen another version because it makes visible the close connection between Arrow's Theorem and the manipulability results.

(iii) Condorcet winner criterion
(iv) Non-manipulability
 (v) Complete and quasi-transitive ordering

Gärdenfors's version looks particularly disturbing. It *seems* to say something like this: there is no decision-making rule that treats all the voters and all the alternatives equally, respects the will of the majority under all circumstances, and is not open to manipulation. Furthermore, Penn, Gailmard and Patty (2008) have proved a result which shows that even when voters' preferences are single-peaked (Sect. 4.2.3) a function can satisfy the Pareto and independence conditions only if it is weakly neutral. This implies that if a voting rule is non-neutral like the Finnish parliamentary voting rule, it may not satisfy the independence condition *even* in the single-peaked cases. Hence, it is vulnerable to strategic manipulation even in those cases—as illustrated by the example 4.10. To simplify: Even procedures based on pairwise comparisons are manipulable, because there must be a method to resolve the cycles. Because this method cannot be based on majority comparisons, it has to violate independence. If the method of resolving cycles is not neutral, these procedures can be manipulated even in single-peaked cases, by *creating* a cycle. That is what the Conservatives did in the Finnish Parliament in 1917. They voted *as if* they had preferred the Social Democratic proposal (*Me vaadimme*) to the Enabling Act.

Although the general manipulability results are of recent origin, they were anticipated by Hoag and Hallett in their treatise on proportional representation, published in 1926:

> At first thought it would seem that an election system should never thus reward a voter for falsifying his real wishes on the ballot, that under all circumstances it should make his vote most effective in carrying out his wishes when they are expressed most accurately. This requirement, however, proves to be an impossible one; for it is impossible to devise a proportional system of election which would not under some conceivable circumstances make it advantageous for the voter to falsify his real will on the ballot. (Hoag & Hallett, 1926, 396)

Hoag and Hallett were the first to present an impossibility theorem on the manipulability of voting rules. The "proportional systems" discussed by Hoag and Hallett are versions of the single transferable vote. In a footnote (fn. 13, p. 369) they add that "it seems probable that no system of election whatever could meet our requirement", but their proof concerns only preferential systems like STV.

4.3.3   Other Forms of Strategic Voting (or Non-voting)

In some cases, it may benefit a voter not to vote at all. (In social choice literature, this phenomenon is sometimes called the *No-show Paradox*.) In the example below, the method used is plurality runoff:

Example 4.11

35 voters	40 voters	24 voters
a	b	c
b	c	a
c	a	b

If everyone votes according to her true preferences, a is the winner of the runoff. The group with the preference order $b > c > a$ could have prevented this result by voting strategically, that is, voting for c in the first ballot. Alternatively, if more than 15 (but fewer than 31) of the members of that group had abstained, the runoff would have taken place between a and c, and again, c would have won. This result is rather disturbing. Abstaining, unlike, perhaps, outright strategic voting, cannot be regarded as an ethically dubious choice. Even if voting is regarded as a civic duty, abstention should be allowed for those who are indifferent or cannot make up their minds (casting an empty vote is, in this context, the same thing). But the example shows how it can be against one's interests to participate in democratic decision-making, even when one happens to have an opinion on the issue. It can be shown that when there are more than three candidates, a situation of this kind may appear in all systems which honour the Condorcet winner criterion—but not only in them. All neutral and anonymous non-monotonous systems (for example, AV, plurality runoff, supplementary vote, and Nanson's rule) may produce the paradox. As Example 4.11 shows, this version of the No-Show paradox arises in connection with the Condorcet paradox (Moulin, 1988).

Does the No-Show problem have any practical relevance? Here is a concrete example. In some decision-making situations, there is an implicit or explicit *quorum* requirement. A proposal can be accepted only if at least a certain number of those entitled to participate in decision making actually do participate; for example, in contemporary Italy, as well as in the Weimar Republic, the *quorum* in referenda is 50 % of all eligible voters. Those who oppose a proposal may try to prevent its victory by campaigning for a participation boycott instead of campaigning for a "no" vote.[31]

Still another "weaker" form of strategic voting is what Brams (1982) calls *truncation of preferences* (or, less technically, "plumping"). The standard supposition in the theories of social choice is that voters' preferences are *complete* and *strict*; in other words, they are able to rank all feasible options. However, some rules, for example, STV as applied in Ireland, allow a voter to express her entire (ordinal) preference orderings, but she is not *forced* to rank all the alternatives. This

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[31] Technically, majority rule with a *quorum* is non-neutral (because it favours the *status quo*) and non-monotonic (because it is sometimes rational to abstain from voting rather than vote for the *status quo* alternative). Notice that the rule used, e.g. in the Scottish referendum on Scotland's Devolution Act in 1979—that at least 40 % of the eligible voters should vote *for* the Act rather than just vote—is monotonic, and does not produce a No-Show paradox. It seems that non-monotonicity is another sufficient condition for the paradox, although I have not seen any formal proof of this conjecture.

is reasonable, especially when the number of candidates is large. As a completely indifferent or indecisive voter should be allowed to abstain or to cast a blank vote, *a fortiori* a voter who has no clear preferences between some candidates should be permitted to cast a "truncated" vote. The problem is that sometimes it may benefit a voter to not reveal her full preference ordering even when she has one. In contrast to a case of ordinary strategic voting, the voter is telling the truth about her preferences, but not the full truth. Fishburn and Brams (1984, 402) have shown that when there are four or more voters, all rules that are not manipulable by "sincere" truncation violate the Condorcet criterion (As in the No-Show cases, the Condorcet criterion is, again, a sign of trouble!). Trivially, all rules that are based only on voters' first preferences are immune to this form of manipulation. Slightly less obviously, the plurality runoff and the supplementary vote do not create any incentives to truncate preferences. In most applications of the Borda rule, voters are supposed to express complete preference orderings. The usefulness of truncation in Borda-like systems depends on how incomplete ballots are handled (Nurmi, 2007, 4–6).

The following example shows how truncation may benefit a voter in alternative vote/STV systems.[32] Suppose that there is only one official to be elected and 21 voters with the following preferences:

Example 4.12

7 voters	6 voters	5 voters	3 voters
a	*b*	*c*	*d*
b	*a*	*b*	*c*
c	*c*	*a*	*b*
d	*d*	*d*	*a*

If no-one truncates, candidate *d* is eliminated first, and her three second-place votes transferred to *c*. After this transfer, the next to be eliminated is *b*. Her second-place votes go to *a*, who is the winner. Assume, however, that the three voters favouring *d* do not express their other preferences. No votes are transferred, and the next one to be eliminated is *c*. The votes of her supporters go to *b*, who is elected—a result that pleases the three supporters of *d*, for they ranked *b* above *a* (Fishburn and Brams, 1984). An example of a voting rule which was actually abandoned because it invited this particular form of manipulation is the Bucklin or Grand Junction system, once used in several city elections in the USA (Sect. 3.1.4). Consider again Example 4.12. According to the Bucklin rule, we start by counting the first preferences of the voters, then their second preferences, etc. The winner is the

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[32] In Irish STV elections, truncation is allowed. Thus, in the Irish by-elections from 1923 to 1944, the average number of those voters who indicated only their first preferences was 45.2 %. Since the War, their relative number has decreased; in 1965–1982 their average number was 15 %. One consequence of this practice is that sometimes Irish by-elections fail to yield a majority even when all the preferences are counted. The more common the practice is, the nearer the results are to those reached by simple plurality (Punnett, 1987, 35–37). The same holds true in respect of all systems which allow the expression of other than first preferences.

candidate who first passes the critical limit of half the number of voters (in our example, collects at least 11 votes); if more than one candidate pass the threshold in the same count, the one with the most votes wins. In the example, no candidate receives a sufficient number of first-preference votes. Both a and b pass the limit when the second-preference votes are added to the first-preference votes, but candidate b has more of them. The seven voters who marked a as the first and b as the second could have prevented b's victory by not expressing their second preferences. Hallett and Hoag report, how, under the Bucklin system,

> in the 1921 election in Cleveland 28 per cent of the voters marked second choices for mayor, and only 18 per cent for council. In the first election in San Francisco under this system the number of second choices marked was less than three percent of the number of first choices... (Hoag & Hallett, 1926, 476)

Strategic preference-truncation became a norm rather than an exception in the cities where the Bucklin rule was used. As Hoag and Hallett note, when all voters refrain from expressing other than their first preferences, the Bucklin system is reduced to simple plurality. If, however, there are some voters who are too ignorant or too honest to conceal their other preferences while the others do it systematically, the voting results may diverge from those produced by a simple plurality in an arbitrary and unpredictable way. In Minnesota, the State Supreme Court declared the Bucklin system unconstitutional partly because of its vulnerability to preference truncation:

> The preferential system directly diminishes the right of an elector to give an effective vote for the candidate of his choice. If he votes him once, his power to help him is exhausted. If he votes for other candidates he may harm his choice, but cannot help him. (The Court in *Brown vs. Smallwood* (1915), cited after Hoag & Hallett, 1926, 476)

Saari (2001a, 53–59) provides another interesting real-life example of strategic truncation. In 1999, the Society for Social Choice and Welfare (a highly sophisticated electorate!) elected its president by using the approval voting method. In addition to voting, each voter was asked to rank the three competing candidates (here, a, b, and c). Instead of adopting Saari's more informative technique of "representation triangles", I shall represent the preference profile of the voters in the standard way:

Example 4.13

13 voters	11 voters	11 voters	8 voters	9 voters
a	a	b	b	c
b	c	a	c	b
c	b	c	a	a

Under the approval rule, the voters were free to approve either one or two candidates. This means that, given the preferences, a could get any number of votes between 24 and 35, b could get 19–41 votes and c 9–28 votes. Any of the three candidates could be victorious, or become as the second or as the third, depending on the strategies of the voters. What actually happened was that only one voter voted for a second candidate! Because of voting strategies, the election actually was

a plurality vote. Consequently, candidate *a* was elected, although candidate *b* was both the Borda- and the Condorcet-winner.

Some authors, most notably Brams and Fishburn (1983), praise approval voting, because it is said to encourage voters to vote sincerely. Something similar has been said about "range voting" (Heckscher's Immanent Method), the utilitarian rule which allows voters to give every candidate a number between 0 and 1, and the candidate with the largest total wins (Sect. 3.3.4). Smith (2006, 26) argues that this rule, like approval voting, is uniquely invulnerable to manipulation. However, Tideman (2006, 238) claims that both range voting and approval voting are highly susceptible to strategizing. This apparent disagreement is due to the different definitions of "manipulation" and "strategizing". Example 4.13 shows that the outcomes of approval voting and of other multiple-vote rules depend upon how people use their extra votes or points. These methods increase "sincerity" in the sense that under these rules, it is never reasonable not to vote for the most-preferred candidate—but the way the *other* candidates should be treated is entirely a strategic matter. "Sincerity" is achieved by relaxing the rules of "sincere" conduct. Even if rules like approval voting and range voting encourage "sincerity" in this more permissive sense, they actually give much more room for strategic choices than single-vote rules (Nagel, 2007; Niemi, 1984). Moreover, truncation, unlike the more complicate forms of strategic voting, is psychologically attractive: a voter can manipulate simply by *not* doing something.

Leaving aside the question of "sincerity" for a moment, we have identified several forms of strategic behaviour possible in voting contexts: (1) voting *against* the best option in order to help that option, (2) voting for the second-best in order to avoid the worst, (3) expressing an untruthful preference between two (or more) option in order to help a third one, (4) abstaining in order to influence the outcome, (5) truncating, with the same purpose, and (6) exaggerating intensity of preference. A rule is non-manipulable if and only if it is *always* best for every voter or group of voters to vote according to her/their true preferences, regardless of what the other voters do. Independence and monotonicity are together sufficient to exclude all these forms of manipulation.

Some rules in actual use do satisfy the independence and monotonicity requirements. For example, a single-ballot majority or qualified majority choice *does* respect independence even when the choice is made from a set of more than two candidates. They are not manipulable in the strictly technical sense used in the theorems above: a voter cannot improve the outcome—that is, to get a preferred candidate elected by that procedure from the given set of candidates—by voting against her true preferences. However, Saari (2008, 60) has argued that even those rules invite voters to vote in a strategic way. In a sense he is right—but it is important to see why. A single-ballot majority rule is non-decisive (in other words, it violates the domain-requirement). When there is no majority behind any candidate, it fails to make any choice. However, as I noted in Sect. 2.2.2, in real life *some* state of affairs prevails even when a voting rule fails to make a choice. There may be a new election, perhaps with a different set of candidates and/or with a different electorate; in the meantime, someone has to act as a caretaker and so on. Some voters may well have an interest to

create—or to avoid—such a deadlock, even by voting against their true candidate-preferences.[33] Hence *all* real-life voting rules are actually manipulable in a wider, non-technical sense, when the number of candidates is larger than two. Only decision-methods which are not based on voting avoid this predicament. Obviously, a dictatorial rule is non-manipulable: a dictator has no rational reason to misrepresent his or her preferences. Further, a rule which chooses *all* the candidates having some support does not create any strategic incentives. We are now able to see the full relevance of one aspect of Arrow's independence condition: rules which satisfy the condition are immune to all forms of strategic behaviour, but they are undemocratic, or indecisive, or applicable in special cases only.

4.3.4   The Normative Significance of Manipulability

Prima facie, manipulation seems to be a problem for any normative theory of democratic government. First, following the famous comment of Borda, we may simply say that strategic voting is *dishonest*. The purpose of an election is to determine the true will of the people. Hence voters have a moral obligation to express their true preferences (Hartvigsen, 2008, 15). Second, manipulation introduces an element of *arbitrariness* into collective decisions. If we believe that the role of voting is, at least under some conditions, to reveal the will of the people or the general will, we are not happy with the fact that voting outcomes are determined by arbitrary factors. Third, there are considerations related to *democratic equality*. It is worth emphasizing that in modern democracies the main strategic actors are not individual voters. Rather, they are parties and other organizations. Cohesive, disciplined and experienced party machines are more likely to be able to formulate and implement complex voting strategies. We do not want democracy to be a game which could be won just by superior strategic knowledge or organizational skills (Dummett, 1992, 116; 1997, 16).[34] The fourth point is that manipulation by

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[33] This can be illustrated by a further example. Nurmi (1998, 342) discusses a referendum rule which would ask the voters to submit their full preference orderings. If there were a Condorcet-winner, the rule would select it; otherwise the issue would be decided by the Parliament. He adds: "This method would make the referendum invulnerable to strategic misrepresentation of preferences". Yes and no. If the voters could anticipate the decision of the Parliament, they might vote in a strategic way in order to *produce* (or to avoid) a cycle which would transfer the decision to the Parliament. To take an analogy, in the US presidential elections voters and/or electors may try to deadlock the Electoral College by voting for a third candidate, in order to transfer the election to the House. (This was the alleged strategic aim of Governor Wallace and his supporters in the 1968 elections.)

[34] Some theorists of democracy disagree with this judgment. For example, cumulative voting has been defended because it "allows interest groups to plan strategically to maximize their representation. Each group can estimate its strength, determine the number of candidates it can elect, and instruct its members how best to vote in order to elect the group's candidates" (Ortiz, 1982, 153). The idea is, presumably, that the ability of a minority group to vote strategically is a rough measure of the intensities of the preferences of its members.

representatives blurs their voting records and makes it more difficult for us to evaluate the performance of our representatives (Kelly, 1988, 103). Their ability to apply complex strategies is dependent on their ability to justify their possibly counter-intuitive choices for their supporters. Hence, strategic voting diminishes the *accountability* of elected representatives. Catt (1989, 556) argues that, "the democratic ideal demands sincere voters". The fifth point is that some *prima facie* desirable properties of voting rules may be undone when some or all voters vote in a strategic way. And the sixth point is that the no-show paradox reveals that participation in democratic decision-making or expressing one's complete opinion may sometimes be against citizens' own interests; there is a potential tension between voters' interests and the idea that participation is a civic duty.

Let us start with the first claim. What would make strategic voting dishonest? If strategic voting were simply a form of lying, votes should be considered as (true or untrue) statements. However, I have already rejected that idea in *political contexts*. Nevertheless, strategic voting may, like voting, be based on misleading, or on exploiting others' mistaken beliefs. In the 1917 Finnish case (Example 4.9), for example, the Conservatives were able to manipulate successfully only because the Socialists were voting sincerely in the first ballot. Why did the Socialists not vote strategically? Either they believed that the Conservatives would vote sincerely, or they considered themselves to be bound by their increasingly radicalized constituents. Their own proposal ("*Me vaadimme*") was essentially a gesture meant to satisfy the radicals in the Workers' Councils; the SDP parliamentary group could not realistically expect to get it accepted in the Parliament dominated by the non-Socialist groups. In the first case, the Conservatives, by voting strategically, exploited a mistaken belief of their opponents; in the second case they exploited their opponents' commitments. In both cases, the success of the strategy was based on a contingent asymmetry between the parties. This can be generalized: the most problematic cases of strategic voting are those in which some voters achieve their preferred result because other voters are, because of ignorance or integrity, not following their optimal strategies. In those cases, the strategists are violating the famous Kantian "transcendental formula of public right" according to which all actions that affect the rights of other persons are wrong if their maxim is not consistent with publicity.

Suppose, however, that in some assembly strategic voting becomes a generally shared practice and that all members and groups are equally effective in strategizing. Because dishonesty is, by definition, an attempt to exploit other people's beliefs or commitments, in such an assembly strategic voting should no more be considered dishonest, for all know and know that the others know etc. that everyone will vote in a strategic way. Arguably, the second and fourth problems associated with strategic voting would still be there: the outcomes resulting from universal strategic voting would sometimes look arbitrary and, consequently, it would difficult for the citizens' to assess the performance of the members. The idea of universal strategic voting gives arises to two opposite arguments. Some theorists of social choice have argued that while manipulation by strategic voting (or by adding and removing alternatives etc.) is logically possible, it is not

computationally feasible for most voting rules. According to this argument, even if the required information about voters' preferences were available, the required calculations are too complicated. De Bruin (1985, 1987) has claimed that significant strategic voting is not a real possibility, since opportunities for manipulation which theoretically exist can be ruled out for all practical purposes,

> For successful political manipulation of a voting procedure, an individual participant needs complete information about the preferences which the other voters are going to announce. But if such omniscience were indeed present, manipulation would become virtually impossible since everybody would then know the sincere preferences of everybody else. (de Bruin, 1987, 45)

The first part of the argument refers to complexity, while the second part is based on something like a political analogy of the Random Walk theorem in economics. This theorem says, roughly, that when all speculators are fully informed, speculation becomes impossible.

In his extensive—and often quite telling—critique of the social choice approaches Gerry Mackie argues in a similar vein: "We know for sure that if the distribution of preference orders is such that they are single-peaked, the Gibbard-Satterthwaite theorem does not apply, there is no chance for strategic voting to succeed" (Mackie, 2003, 161). Patty and Penn (2014, 44) take this to mean that there *cannot* be any incentives to vote strategically when voters' preferences are single-peaked. If this really is what Mackie is trying to say, it is, indeed, "plainly and tellingly incorrect". In the hypothetical counterexample of Patty and Penn (p. 45) as well as in my real-life Example 4.9, the preferences *were* single-peaked. In both cases, strategic voting is possible. However, in both cases strategic voting could be countered by strategic voting, and "sophisticated votes cancel each other out in a manner of speaking, and our true and fair outcome is thus restored" (Mackie, *idem*). In this reading, Mackie's argument is actually the same as de Bruin's.[35]

Aki Lehtinen's argument (Lehtinen, 2007, 2011) is diametrically opposed to that of de Bruin's, but the normative conclusion is the same, namely that strategic voting does not constitute a serious problem. According to him, voters should be modelled as utility-maximizers acting on incomplete information. On the basis of his simulation results Lehtinen argues that if voters utilize fully their strategic opportunities, they are likely to produce outcomes which, in utilitarian terms, are the best possible. Lehtinen claims that this result is largely independent of the rules used. According to him "[t]hese findings suggest that strategic voting is a virtue rather than a vice if (. . .) if all voters engage in expected utility maximization" (Lehtinen, 2007, 36). The argument is, then, based on the assumptions that (1) all voters are equally rational utility-maximizers, (2) voters' utilities can be fully defined in terms of options on the agenda (thus excluding the utility values of all other aspects and consequences of the decision process, as well as their interactions with other

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[35] Mackie's comment on p. 156 of his book seems to support Patty's and Pen's reading, but his further comments on pp. 161–162 support my interpretation.

decision-processes, e.g. in the form of logrolling), (3) voters' utility scales are roughly equal, and (4) the utilitarian criterion is normatively adequate. Personally, I doubt the general validity of *all* these assumptions. For the purposes of this chapter, however, it is enough to challenge supposition (1). Voters are likely to exhibit different motives and their informational states and computational abilities are likely to vary. There is no *a priori* reason to suppose that they would generally, by playing their optimal strategies, produce the utilitarian overall optima. This reply is at the same time an answer to de Bruin and to Mackie. Clever politicians are like good players in chess, bridge, or poker. They do not win by running complex algorithms but by utilizing the available (incomplete) information, by applying heuristic strategies and by taking risks. Consider again the example taken from the Finnish Parliament 1917. Although the underlying preferences were-single peaked, the Conservatives were able to practice successful manipulation.

4.3.5   *In Praise of Manipulation?*

Lehtinen is perfectly right when stating that *sometimes* strategic voting seems to improve the performance of a rule. For example, while an absolute loser may be elected under the plurality rule when voters vote sincerely, such a loser will not be elected if voters vote strategically; indeed under fully rational strategic voting the plurality rule invariably elects the Condorcet winner if one exists. Consider again Example 3.2 on the plurality rule. The three voters in the example may vote strategically for *c*, thus avoiding the election of the absolute loser *a*. If the five voters supporting *a* realize this, they may decide to switch their support to *b*. Then, the three voters should, after all, vote *b*. An alternative scenario is that the four voters vote for *b* in order to avoid the election of *a*. These observations show at least that strategic voting is not an unmitigated evil in all situations. Strategic voting may make *prima facie* attractive rules look less attractive, but it *may* also improve the performance of a rule in respect with various fairness criteria.

   There is an interesting asymmetry between the two examples discussed above. In the Example 4.10, which illustrated the non-monotonicity of the plurality runoff, some voters vote for their *least-preferred* candidate in the first ballot in order to help their most preferred candidate in the second. Contrast these examples with the behaviour of the voters in plurality elections, (illustrated by the Example 3.2). From opinion polls and from past experience the voters may learn, for example, that about 40 % of them prefers the Conservative candidate and about the same proportion prefers the Labour candidate, while about 20 % favours the Liberals. The Liberal voters have no real prospect of getting their candidate elected. Some of them may, for example, strongly oppose the Conservative candidate but see the Labour candidate as a tolerable second alternative. If they ultimately cast their votes for their *second-best* in order to prevent the choice of the worst, they are voting strategically. However, the voters' choice is not generally perceived as *insincere*. Rather, it is seen to be justified by "realism", by a willingness to accept

compromises, by the desire to avoid the worst rather than aim at the optimal. In democratic politics these dispositions are often seen as virtues rather than vices. In cases like this, strategic voting is a voters' response to the unavoidable imperfections of the system itself (more precisely, its tendency to violate the independence condition and therefore the Condorcet criterion). Strategic voting may work as an antidote against intentional manipulation or unintentional defects of the agenda.

In their paper 'In Praise of Manipulation' (2007) Keith Dowding and Martin van Hees distinguish between *sincere* and *insincere* manipulation (or strategic voting). Informally, sincere manipulation is possible for some voters if they can make some option the outcome by ranking it first, and if they all prefer that outcome to the outcome that would have resulted otherwise. In other words, voters vote their second-best (or third-best, etc.) option instead of the best one in order to avoid a worse option (strategic behaviour of the type (2) above). All other forms of strategic voting (types (1) and (3)–(6) above) would be classified as 'insincere' by Dowding and van Hees. Interestingly, Albert Heckscher (1892) drew the same distinction between two forms of strategic voting in his early work. Generally, there are two motives for strategic voting: 'prudence' (*forsigtighet*) and 'shrewdness' (*listighet*) (Heckscher, 1892, 19–20; 59–60). The difference is this. *Prudent* voters vote contrary to their true preferences in the sense that they vote for their second-best alternative in order to avoid the worst alternative. *Shrewd* voters express an untruthful preference between two (or more) alternatives in order to help a third one. For Heckscher, as for Dowding and van Hees, the second motive is more objectionable.

Dowding and van Hees are able to show that although all voting rules are vulnerable to *some* forms of strategic voting, some rules are immune to insincere manipulation (shrewd voting). A voting rule does not allow insincere manipulation if and only if it satisfies *top-monotonicity*. A rule satisfies this property if a candidate can never become a loser when her first-preference support increases. This is stronger condition than the (weak) monotonicity; it means that *no* subsequent changes in the lower preference rankings can undo the increased first-preference support. Actually, this implies that all information about voters' lower preferences has to be ignored. In effect, top-monotonicity rules out all methods that utilize this kind of information; for example, all Condorcet-effective rules and the Borda rule are to be excluded. Trivially, the top-monotonicity requirement eliminates most forms of strategic voting. If we add May's standard conditions of anonymity and weak neutrality, the *only top-monotonous voting rule for choosing a single candidate is the plurality rule*[36]: among neutral and anonymous rules, it

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[36] I have seen no proof of this, so here is a quick one. The necessary and sufficient condition for a rule being equivalent with the plurality rule is that for every preference profile, candidate x is elected if and only if there is no candidate who has more first-preference support than x (ties are ignored). Suppose that R is a weakly neutral and anonymous rule which is *not* equivalent to the plurality rule. Then there must be some preference profile P such that (i) no candidate has more first-preference support than x, but (ii) R nevertheless chooses another candidate y, who has less first-preference support than x. Now let P' be another preference profile, derived from P simply by

alone is immune to "insincere" forms of strategic voting. This result is interesting, for usually the considerations related to strategic voting are used in arguments *against* the plurality rule. The result proved by Dowding and van Hees seems to provide a strategy-based argument *for* the rule. A related point is actually made in the standard defence of the first-past-the-post in practically-oriented discussions. By praising the plurality rule for its stabilizing effects, many theorists of democracy implicitly approve the "sincere" (or "prudent") form of strategic voting, for a stable two-party system prevails under plurality rule partly because it encourages voters to vote for their second-best. Indeed, a large part of the dispute between the advocates and the critics of proportional representation is related to the desirability or undesirability of widespread "sincere manipulation" (although the participants of the debate do not speak in these terms).[37] If we are less enthusiastic about the plurality rule, van Hees and Dowding's result may also be seen as an impossibility result: "insincere" strategic voting in *single-member elections* can be excluded *only* by accepting the plurality rule, with its less appealing aspects. There is, again, a trade-off between different normative requirements.

Armed with the crucial distinction between insincere and sincere manipulation Dowding and van Hees criticize the standard treatments of strategic voting. "Sincere manipulation" (prudent voting) cannot be treated as a form of lying. Its success is not (normally) dependent on informational or motivational asymmetries. Hence, I would add, its success is not dependent on a violation of the Kantian formula of publicity. Rather, by supporting their second-best rather than their best candidate, voters are actually making a compromise. Making compromises is, *prima facie*, fully compatible with the ideal of democratic government, perhaps even required by it. Moreover, although the possibility of sincere manipulation makes democratic outcomes partly dependent on the voters' information and strategic skills, the required information and skills are, according to Dowding and van Hees, just such as we *want* the democratic citizens to possess. In order to manipulate successfully, they have to understand the voting mechanism, their own preferences, and the general distribution of opinion in the electorate (Dowding & van Hees, 2007, 10). If this counter-critique can be accepted, there are fewer reasons to be worried about the manipulability results than most interpreters of the social choice theories think. At least there exists one relatively innocent way to make collective decisions, namely the plurality rule. Contrary to the expectations, the plurality rule seems to minimize the role of *harmful* manipulation—*if* we accept Dowding and van Hees's basic distinction as ethically relevant.

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exchanging the places of *x* and *y* in the preference orderings of every individual. Because rule *R* is anonymous and weakly neutral, *R* must choose *x* (and not *y*) from *P'*. However, the move from *P* to *P'* did increase the first-preference support of *y*. By definition, *R* cannot be top-monotonous. Hence, if a rule is weakly neutral, anonymous and top-monotonous, it is equivalent to the plurality rule. Q.E.D.

[37] Similarly, some authors have defended STV (Reilly, 1997), the cumulative vote (Ortiz, 1982), or the plurality runoff (Sartori, 1997, 67) for the very reason that these rules *allow* certain forms of strategic behaviour.

In their article Dowding and van Hees effectively rebut the claim that strategic voting should *always* be considered as dishonest. Strategic voting may be 'sincere' under a plurality rule. But is this enough? After all, dishonesty was not the only problem associated with strategic voting; the first items in the list of the possible problems were 'arbitrariness' and 'political inequality'. In order to assess the argument, let us consider a real life example, taken from Niou and Paolino (2001). In the presidential election of Taiwan in 2000 the method used was the single-ballot plurality. There were three candidates: Lien Chan, the nominee of the ruling Kuomintang (KMT) party, the Democratic Progressive candidate Chen Shui-bian, and James Soong, who ran as an independent candidate after failing to be nominated by KMT. The polls consistently showed that Lien was behind the other two candidates in support; at the same time most of the respondents expected him to win. During the last 10 days, publication of polling information was not allowed by the law. The actual result was: 39.9 % for Chen Shui-bian, 36.8% for James Soong and only 23.1 % for Lien Chan. The KMT supporters were furious. Many of them blamed the party leadership for causing the split in the party, and for making over-optimistic predictions.

According to Niou and Paolino, the outcome of the Taiwanese election resulted from a *coordination failure* (a phenomenon already discussed in Sect. 3.2.4):

> The KMT camp claimed that Lien was still ahead in all the major polls, suggesting that Soong's supporters should vote strategically for Lien. The Soong camp, on the other hand, argued that Lien was running a distant third and that his supporters should vote strategically for Soong. During the opinion poll blackout period, supporters of Lien and Soong were apparently confused. (Niou & Paolino, 2001, 9)

The analysis by the authors reveals that the winner of the actual election, Chen, was a Condorcet loser: he would have lost a two-man race against either of the competing candidates. Thus, for many KMT voters, (sincere) strategic voting would have been a reasonable option. But because race was so close, coordination was difficult. *Who* should vote strategically: those who ranked Lien as first and Soong as second, or those having the opposite preference? This example shows why some of the traditional worries concerning strategic voting may be relevant, in spite of Dowding and van Hees's theoretical argument. The polling blackout played an ambiguous role. As Saari (2010, 13–14) remarks, withdrawing relevant information about preferences is one "natural" way to reduce the role of strategic action in elections. At the same time, lack of information increases the likelihood of coordination failures. Niou and Paolino (2001, 21) maintain that although allowing polling data to be published right up to the time of election is desirable because it better allows for strategic coordination that best permits more socially-preferred outcomes to occur, it also seems possible that such information could in the long run also drive out the parties who are most likely to be Condorcet winners (p. 21).[38] The result of the Taiwanese election was, in a sense, arbitrary, for it was essentially dependent on the lack of information among the voters. The poll blackout made

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[38] Similar polling blackouts have been applied, for example, in France and Portugal.

things worse, the KMT leadership may perhaps be blamed for strategic mistakes, but the basic problem is that such coordination failures are unavoidable when the plurality rule is used in mass elections.

The argument that under the plurality rule, strategic voting is generally harmless or even beneficial carries less than full conviction. Ordinary voters are likely to rely on simple strategies which do not require detailed information, complex calculations, or risk-taking. Parties may be able to make more complex strategic calculations, but their ability to guide their supporters has its limits. For these reasons, sophisticated equilibrium models are unlikely to have much predictive force when applied to mass elections. Coordination failures are a real possibility in plurality and runoff-elections.[39] The winners may well be Condorcet losers, opposed by a majority of voters. The voters cannot be expected to learn the rules of the game, for elections are not frequent, and every election may have its own unique strategic aspects. To generalize: the two most popular and most convenient suppositions used in the "rationalistic" models of voting are both unrealistic. First, people do not always vote sincerely. Second, as I said, people are not well-informed utility-maximizers playing their optimal strategies.[40] "Sincerity" and "rationality" are variables. They depend on prevailing norms and on organizational discipline. For example, in spite of the failure in 2000, the Taiwanese KMT party has generally been very effective in coordinating votes; much more effective than its political competitors (Rigger, 1999, 39–54).

Catt (1989, 556) complains: "The very fact that voters resort to strategic behaviour suggests that the system is not working properly". To summarize: non-manipulability would be *prima facie* desirable because it is connected to the equality and transparency of the decision-making system. For these reasons, many people argue that it would be desirable to have a system which cannot be manipulated, even in principle. Alas, the manipulability theorems show that because the possibility of manipulation follows the violation of Arrow's independence condition, such a system cannot be found. What we nevertheless could try to do is to *minimize* the role of manipulation. For example, it should be relatively easy for a voter or a voter group to predict the probable consequences of their choices without

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[39] Papua-New Guinea provides another example which highlights different forms of strategic behavior under different rules. Before 1975, the country used the STV system in parliamentary elections. Because Papua-New Guinea is a clan-based society, voters almost invariably gave their first preference votes to candidates from their own clans, but the second and third preference votes became matters of negotiation. The system tended to reward inter-clan cooperation. After 1975, when the plurality rule was introduced, the competition between the clans took a more malign form: candidates with little hope of winning a seat were introduced in order to create coordination failures, that is, to split the votes of competing clans. Elections became zero-sum games (Reilly, 1997, 10–12). Although negotiated vote-trading and splitting the opposition by manipulating the agenda are both forms of manipulation in the technical sense, and although the former is classified as 'insincere', we tend to evaluate them differently in this context.

[40] Experimental studies indicate that "under uncertainty, rather than trying to bring about their best alternative, the majority of informed subjects show satisficing behaviour; they try to secure themselves at least their second-best alternative" (Kube & Puppe, 2009, 49).

undertaking complex strategic calculations. This is not just a matter of "honesty" or "dishonesty". Moreover, the instrumentally optimal strategies should be justifiable in the sense that they should be compatible with the basic rationale of the used rule, and should not require voters to vote against their basic commitments. The fate of the Bucklin system (Sect. 4.3.3) shows that at least sometimes manipulability is so disturbing that it constitutes a reason to switch to a less manipulable system. The Bucklin rule invites voters to submit their full preference orderings, but rewards those who fail to do so. More generally, *all* rules which purport to take other than first preferences into account (STV,[41] cumulative voting, approval voting, Borda,[42] Bucklin etc.) collapse into the plurality rule or into its multi-seat version (SNTV) when voters truncate their preferences in a strategic way. Consequently, they may also produce coordination failures and elect absolute losers. The irony is that the main motivation in developing rules of this type was the poor performance of the standard plurality rule.

To conclude, the normative problem involved in the different forms of strategic voting is a systemic one. It is difficult to argue that some voting strategies are unethical, if they are permitted by the system and if the *other* voters or parties are likely to use them for their own advantage. However, the resulting collective outcomes may still be ethically defective: voters and parties are trapped into collective action dilemmas. If information and the ability to act on the information are asymmetrically distributed, some voter groups may have an unfair advantage. In the long run, widespread strategic behaviour may damage the legitimacy of democratic institutions. The real issue is the normative consequences of the workings of different systems, not the "sincere" or "insincere" nature of the behavior of individual voters. Nevertheless, politicians are often constrained by their future interactions. Among professional politicians, ruthless attempts to utilize informational

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[41] STV/AV is often defended because it takes other than first preferences into account, because winners in single-seat contests are elected by majorities, because it avoids the Borda paradox, and because it is more likely than the plurality rule to select a Condorcet winner (e.g. Stolpe, 1997). *All* these beneficial properties may disappear if voters are allowed to truncate. In the by-elections in Tipperary in 1947, strategic preference truncation was extensive; thus, the total vote of the final winner was only 43.5 %, representing an accumulation of first, second, third and fourth preferences. Can we say that the final winner was more entitled to the seat than the plurality winner who got 32.1 % of the first preference votes? (Punnett, 1987, 37) Perhaps truncation should be forbidden, as in Australia? The price of this solution is that an election result may be determined by voters who—when they have no lower preferences or are indifferent—fill their ballot papers in a completely random way. Moreover, if voters cannot truncate, they have another possibility: to give their lower preference votes to candidates who have no real chances of becoming elected (Cox, 1997).

[42] Borda-like systems are no exception: "In Nauru and Slovenia [two countries using Borda-like systems in some general elections], we found that voters tended to manipulate such systems with the objective of maximizing the likelihood of a rival to their first choice. In Slovenia, where lodging full preference ranking was optional, we found on average, only 41.8 % of voters ranked a second candidate in our five contests. (. . .) On Nauru, that difference was maximized by placing major rivals as last preference and/or by introducing weak candidates to mop up intermediate preferences" (Fraenkel & Grofman, 2014, 203).

and motivational asymmetries whenever possible may lead a loss of credibility. In small assemblies, strategic voting may often be constrained by informal norms, by context-dependent expectations, and, in representative bodies, by the anticipated reactions of the constituents. The hypotheses of universal honesty and universal strategizing are equally implausible. Here, it important to notice that the theory of social choice is not a predictive science. It does tell *what is possible and what is impossible* under alternative behavioural hypotheses: it does not tell us whether voters in some particular situation are going to vote sincerely or strategically, whether they are maximizers, satisfiers, or perhaps guided by norms, or whether they see voting in instrumental or in expressive terms.

4.3.6   Proportionality and Arrow's Conditions

The conclusion of the previous section puts Dowding and van Hees's argument into doubt. However, their argument can be partly resurrected. *Proportional represent-ation* both excludes shrewd voting *and* minimizes the role of coordination failures.

Sometimes it has been claimed that systems of proportional representation cannot, unlike the plurality or runoff systems, ever create any incentives to vote strategically. This would not constitute a counterexample to the basic manipul-ability theorems, for the PR-systems are not social choice functions in the standard sense (Sect. 3.5.6). Nevertheless, the claim is not true, for manipulability and strategic voting are not restricted to rules which can be represented as standard social choice functions. First, in any system of proportional representation, there has to be either a legal or a *de facto* threshold. For this reason, no system produces exactly proportional results (Sect. 3.5.4). Consequently, one can "waste one's vote" even under a PR rule; in other words, one can vote for a party which has no chance of winning any seats. Hence, at least *some* amount of "sincere manipulation" necessarily takes place even in list-proportional elections.[43] The logic is basically the same as in plurality systems. Second, in the discussion on proportionality, I stated that one function of elections is to produce a government. For example, Germany and Sweden have for long been governed by parties which are large, but fall short of 50 % of support in the Parliament. In both countries, the ruling parties need support from some small parties. In Germany, the CDU has usually governed together with the small FDP; in Sweden, the Social Democrats have relied on the tacit support of the small Leftist (the former Communist) Party, while the Conser-vatives have allied themselves with the small Centrist parties. As there is a vote threshold in both countries—in Sweden parties gaining less than 4 % of votes are

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[43] The Georgian parliamentary elections in 1995 provide an extreme example of a situation in which people do not vote strategically and the results are extremely disproportional in spite of a PR system. In the Republic of Georgia, as many as 54 parties participated in the election. Because of a modest 5 % threshold, only *three* of them got their candidates to the Parliament. Together, these three parties polled some 38 % of the votes!

not entitled to a seat; in Germany the threshold is 5 %—the supporters of the major parties have an incentive to ensure that their traditional allies get enough votes to gain seats. In the election of a government, a non-monotonicity phenomenon appears: a voter who decides to vote for the CDU instead of the FDP may inadvertently help to produce a Social Democratic government.[44] Although voters may not have a rational motive to vote strategically when their preferences and the outcomes are interpreted in terms of elected candidates, the picture may change when the system is modelled as a two-stage process, and the relevant outcomes are interpreted as coalitions or as alternative policies.

Nevertheless, *ceteris paribus*, the PR-systems tend to *minimize* the impact of strategic behaviour. The generalized version of Duverger's law formulated by Cox (1997) says that in electoral systems based on first-preference voting, when the average number of seats per constituency is M, the upper limit of the effective number of parties is $M + 1$. This follows from the general tendency to vote strategically, for the best "realistic" alternative rather than for the "absolutely best" alternative. However, when M is larger than five, Cox's generalization does not predict the viable number of parties. In the Netherlands, the whole country forms one district with 150 seats, but they do not have 151 parties. With a very large number of seats, the number of votes separating winners from losers is so small that voters are unable to make strategically useful predictions. Thus, a system's tendency to create incentives for strategic voting by violating the independence condition is always a matter of degree. Strategic voting can be minimized by (i) keeping the *de facto* as well as *de jure* thresholds as low as possible, and by (ii) relying on the first preferences only (in effect, by accepting Dowdings and van Hees's requirement of top-monotonicity). The first condition minimizes the need of "*sincere*" strategic voting because it largely removes the need of coordination, while the second condition eliminates the possibilities of "*insincere*" vote manipulation as Dowding and van Hees argued.[45] Proportional representation systems are top-monotonous but they also have a tendency to minimize coordination failures which trouble the single-member plurality systems.

However, transparency—the minimization of strategic behaviour and coordination failures—is not all-important. Another significant requirement is that voting rules—or, more generally, rules of decision-making—should be able to solve value conflicts. This requirement can be illustrated by the following thought experiment.

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[44] "Because of the party setting, the German electoral campaign has acquired a strange character. To keep the CDU in power, its supporters should vote for the FDP. The SDP has to explain to the extreme Leftists that by voting for the PDS [the ex-Communists] they ensure the victory of the CDU. On Sunday, a tactically minded voter has, then, to vote for some party other than the one she really supports" (*Keskisuomalainen,* 13th October 1994; my translation).

[45] Thomas Gschvend's study on strategic voting in various electoral systems (Gschvend, 2009) gives empirical support to the first condition. His findings show that strategic voting was most common in the single-member districts of some mixed systems (Mexico, Germany, New Zealand) and in the UK. It was virtually non-existent in the very proportional PR-systems without geographical districts (the Netherlands and Israel).

The *first-preference rule* is a rule which chooses *every* candidate who has some first-preference support. The first-preference rule is, then, a form of unanimity rule. It satisfies Arrow's independence condition; hence, it is not manipulable (cf. Craven, 1992, 60, 75). Similarly, the first-preference rule satisfies the path-independence condition. If a candidate is selected from a larger set, the same candidate is also selected from any of the subsets containing that candidate. Finally, the first-preference rule is immune to gerrymandering: the elected candidates remain the same even when voters are divided into subsets. (In other words, the rule is immune to the paradoxes of compound choice briefly discussed in Sect. 2.2.3). The more proportional an "ordinary" electoral rule is, the more it approximates the first-preference rule, and the less room there is for various forms of manipulation. However, the closer a proportional representation rule approximates to the first-preference rule, the fewer *value conflicts* it solves. A perfectly proportional body would give even for any "opinion group" of a single person a right to be represented. In practice, such a rule would be indistinguishable from an assembly of all citizens.[46] Value conflicts had to be solved by some other means inside the assembly. As Shepsle and Boncheck (1997, 191) put it:

> First-past-the-post systems typically (. . .) resolve conflicts *before* legislative politics commences. (. . .) Legislatures elected by PR *reflect* rather than *resolve* political conflict in advance, depending upon post-election parliamentary politics—coalition government, for example—to discover the means of resolution.

The plurality, runoff and similar single-member-systems may be said to offer clear alternatives, to create stable majorities and to solve value conflicts more effectively than PR-systems. They are able to perform all this only by violating several Arrovian conditions. The path-independence conditions are violated because election results in individual constituencies are dependent on the number of candidates running in elections. The domain is drastically restricted at the assembly level, for many opinion groups are left without representation. Finally, the independence condition is probably violated more often than in PR-elections for there are more reasons and opportunities for strategic voting. An additional problem, not focused in the social choice literature, is gerrymandering. The political consequences of electoral re-districting are most dramatic in single-member system, while; in very proportional systems, the effects are likely to be small. This constitutes a violation of the anonymity property. If the importance of a vote depends on the district in which it is given, the voters are not equal.

On the basis of these observations, we may speculate that a "law of conservation" or a "balloon theorem" of strategic opportunities in a two-stage system is a

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[46] Sometimes we use something like the first-preference rule. Suppose, for example, that our task is to select a purely consultative body. We want to ensure that every possible viewpoint is represented. The size of the body is not predetermined. One way to make it as representative as possible is to let anyone who is interested in participating to become a member, or to nominate one. Historically, the first 'representative' institutions have originated from something like the first-preference rule. All qualified voters (for example, the knights) were entitled to be present in assemblies, but those who were unable to attend in person could send their representatives.

practical corollary of the social choice results. The plurality and runoff systems tend to produce stable parliamentary majorities and majority governments—but election results are heavily dependent on the overall distribution of votes, the voters have a temptation to vote in a strategic way, and the constituency structure has a strong effect on the results. A very proportional system produces straight electoral results, but no majorities in legislatures—they are often formed only through a complex negotiation process. Such a system is likely to produce a very fragmented party system, which, in turn, may increase the number of cycles and incentives for strategic behavior inside the representative assembly. To quote Sartori (1997, 10) "the problem with majoritarian systems is that they are too manipulative. The problem with proportional systems is that they permit too many parties." In the Swedish system where the numerous parties form two more or less permanent competing coalitions, elections are a more effective means in solving value conflicts than in some other PR-systems. The cost of this is the possibility of a "spurious majority" and the temptation to vote strategically in order to avoid such situation.[47] Arrow's result seems to explain this dilemma.

4.3.7   Conclusion

Some of the social choice assumptions which generate the apparently paradoxical results are less reasonable when Arrow's Theorem and the related results are interpreted as being about collective welfare or social good. It is by no means obvious that a plausible theory of social good should respect the requirements of independence (Fleurbaey, 2007a; Ng, 1979; Sen, 1982), or Pareto-optimality (Körner, 1980, 175–176; Rowley & Peacock, 1977), or universal domain (Baier, 1967/1982; Brennan & Hamlin, 2000, 106–107; Frohock, 1987; Seabright, 1989, 373–377), or even non-dictatorship (Little, 1952/1973). The first three conditions exclude all processual and other non-welfare considerations (for example. merits or entitlements) as well as interpersonal utility comparisons, while the non-dictatorship or anonymity conditions exclude claims based on, for example, greater need or wisdom. Indeed, Arrow's theorem can be interpreted as demonstrating the impossibility of the theory of social good based only on ordinal

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[47] "For the Swedes, elections provide two alternatives: either to give a second term for the Alliance of the four bourgeois parties, or to grant the power to the Red-Green opposition bloc of the Social Democrats, the Greens and the Leftist Party. Especially in the bourgeois bloc, some parties are so small that their support is close to the four percent threshold. 'Sympathy-voter' acts in the following way: although she is a firm supporter of the Conservative party, she gives her vote to the Christian Democrats or the Centre, so that these parties will not fall out from the *Riksdag*. Their failure would be a catastrophe for the bourgeois Alliance, for the vote share of a drop-out party would be ignored when the totals are counted. Every fifth supporter of the bourgeois bloc is willing to vote the Centre or the Christians for sympathy reasons tells a study conducted by the research organization Sifo" (*Helsingin Sanomat*, 17th September 2010; my translation).

comparisons of individual good. As such, this result is not a great achievement: most important accounts of social good, from Plato to Rawls, are not exclusively based on such comparisons. By contrast, transitivity seems to be a reasonable requirement in the context of social good. *Pace* Seabright (1989), I would say that the main philosophical relevance of the Theorem (if it has any) is related to social decision-making mechanisms. But what actually *is* its philosophical relevance?

In judgment-aggregation contexts—for example, in multi-member courts or in expert decision-making—internal consistency or transitivity seems to be an important requirement. The task of such judgment-aggregating bodies is to weigh the reasons, not just to make a decision or to give a recommendation. As Heckscher (1892, 133) remarked, a court decision is legitimate because of its reasons, not because the judges made it. Courts, unlike parliaments, should also vote on reasons. Hence the consistency/transitivity conditions are central in such contexts. The domain, completeness and anonymity conditions are less plausible, for the agendas of courts and expert panels may be externally given and within such bodies there may be a division of labour based on expertise.

In all democratic decision-making procedures non-dictatorship is *sine qua non*, while the more demanding anonymity property is usually honoured in parliamentary decision-making, in committees and in referenda, but not necessarily in general elections. All minimally democratic two-stage systems of decision-making are non-dictatorial and respect the unanimity principle as well as the principle of universal domain *at the electoral level*. Hence, we know that they are bound to violate some of the remaining conditions. *We are forced to choose between different mixtures of violations of independence and transitivity or path-independence; in practice, between arbitrariness at the electoral level and arbitrariness at the policy-making level*. We cannot totally avoid both forms arbitrariness—although, with a very bad institutional design, we may have a considerable amount of both. This diagnosis—rather than the more dramatic and potentially anti-democratic dilemma of "dictatorship or chaos"—is the most important impact of the impossibility results in democratic contexts. If this line of argumentation is the correct one, the social choice results are potentially relevant for the discussion on the virtues and vices of different real-life democratic mechanisms. They are relevant, because they may help us to locate the inevitable trade-offs between different democratic desiderata.

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Chapter 5
Interpretations

5.1 Reading Arrow

5.1.1 A Mathematical Curiosity?

The basic theorems of social choice were proved by two economists, Kenneth Arrow and Duncan Black, in the early 1950s. At the beginning, political philosophers and political theorists did not take the paradoxes of social choice very seriously. Thus, in 1953, R.A. Dahl and C.E. Lindblom saw "the paradox of voting, as it has been called", as "a minor difficulty in voting that people with a mathematical turn of mind enjoy toying with" (Dahl & Lindblom, 1953, 422). Twenty years later, John Plamenatz could still claim that "such problems are of purely theoretical interest, and politicians have not heard about them" (Plamenatz, 1973, 184), and ten years after Plamenatz, Elaine Spitz (Mates) could stick to her earlier view that Arrow's result was practically irrelevant (Spitz, 1984, 24–25; cf. Mates, 1973; Mates-Spitz, 1978). These dismissals were quite understandable in their time. The results proved by Arrow and Black were formulated in the relatively esoteric framework of Welfare Economics. Although Arrow and Black explicitly related their results to democratic decision-making, it was by no means obvious that these findings had any real importance for democratic theory. Nor were there many serious attempts to connect the results to the real world; hence, those doing empirical work on democracy also ignored them (this was William Riker's judgement in 1961, still shared by Michael Dummett in 1984). Even among the students of applied economics the common practice was often to mention Arrow's result in a footnote, and then go on trying to continue projects shown to be impossible (Johansen, 1987).[1] While the rejection of the central message of the social choice

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[1] The ideological and economic background as well as the early reception of Arrow's result among (US-American) economists is well described by Amadae (2003, Chapter 2). Generally, the first reaction of the welfare economists was negative. One reviewer concluded that "Arrow's

theory was—and may still be—psychologically understandable, its irrelevance has to be argued for. If the results of a formal theory are judged as irrelevant, some of the conditions used in the derivation of its central theorems must be false or meaningless when applied to real phenomena. An outright rejection of the relevance of its theorems should be based on a criticism of some specific, identifiable suppositions. Just saying that the whole approach is "wrong" or "irrelevant" is not very helpful.

Already in the 1950s some theorists of democracy took the results more seriously. In his influential *A Preface to Democratic Theory* (1956), R.A. Dahl reversed his earlier judgment on the relevance of the "paradox of voting":

> Arrow shows that if there are more than two alternatives, any method for making social decisions that insures transitivity in the decisions must necessarily be either dictated by one person or imposed against the preferences of every individual (...). This brilliantly developed and quite startling argument has, unfortunately, so far been totally ignored by political scientists. (Dahl, 1956, 42–43)

This "irrationality vs. dictatorship" reading became more or less the standard interpretation, as we have seen (Sect. 4.3.1). More voices joined the chorus. In 1963, W.G. Runciman, a political sociologist, wrote that "what Arrow has done is to show that strict democracy is impossible—a result which could hardly be closer to the traditional interest of political philosophy" (Runciman, 1963, 133). In the 1970s and early 1980s, it became a common habit among the philosophers of democracy to devote some pages to "the paradox of voting", and in the course of time these summaries become longer and better informed (see, for example, Harrison, 1993, 198–216; Holden, 1974, 109–112; Nelson, 1980, 55–61; Thompson, 1970, 43).

5.1.2   Unanimity as a Solution?

One of the first philosophers of democracy who explicitly stated that the Condorcet Paradox constituted a fatal problem was Robert P. Wolff in his famous attack on political authority (Wolff, 1970/1976, 58–67). Wolff's well-known major argument is conceptual. For him, *all* forms of political authority are illegitimate because the notion of political authority is conceptually incompatible with individual autonomy. This argument does not, as such, have anything to do with Arrow's problem. However, because arguments for the legitimacy of the majority rule are historically and psychologically persuasive, the majority rule deserves special treatment, and the theory of social choice is recruited as an additional support in Wolff's book. His short treatise contains an informed presentation of the Condorcet paradox. The conclusion drawn from the paradox is totally negative:

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conditions are unreasonable and (...) the conclusion is uninteresting" for economists (cited after Amadae, 2003, 119).

> Majority rule can be called into question on grounds of its failure to preserve the liberty of the minority, but it has commonly been thought to be at least a rational method of making decisions, supposing that the members of the community are willing to agree upon its adoption. *In fact it turns out that majority rule is fatally flawed by an internal inconsistency which ought to disqualify it from consideration in any political community whatsoever.* (Wolff 1976, 58–59; my emphasis.)

One could hardly put it more strongly. Wolff's own alternative to the majority rule, misleadingly called "unanimous direct *democracy*", is a community in which only the actual continual consent of every individual could justify any collective action. Under this rule, a single dissenting voice at any moment forces the community to return to the anarchic *status quo ante*. Only unanimous decisions are considered as binding. Many theorists of democracy have rejected the whole approach of social choice as "atomistic" and over-individualistic (Amadae, 2003; Barber, 1984; Frohock, 1987; Pateman, 1986); Wolff seems to confirm this judgment by taking social atomism to its ultimate conclusion.

What distinguishes Wolff's approach from similar ideas expressed by the most extreme theorists of free market is that there are no pre-established property rights in Wolff's scheme. Some *laissez-faire* economists, however, have approached the theory of social choice from the opposite direction. In his 1951 work, Arrow emphasized that his result concerned all social decision-mechanisms: *neither voting rules nor the market mechanism* can produce rational social orderings under all imaginable circumstances (Arrow, 1951/1963, 59, 110). Against this claim, James Buchanan (1954/1960) argued that the whole quest for "collective preferences" or "collective rationality" is misplaced. While individuals may have complete and transitive preference orderings, *collectives* cannot have them. "Collective preference" is a notion as misplaced and illegitimate as "collective mind". This appears as a problem only because our social theories, including that of Arrow, are still infected by the collectivistic metaphysics of Rousseau and the Idealists, and the illiberal political morality of the Utilitarians. The condition which obviously secures collective rationality or consistency in a majoritarian setting is the existence of a permanent majority. According to Buchanan, that would mean a tyranny of the majority: "Minorities under such conditions could no longer accept majority decision without revolt" (p. 84). It is the very fact that majority decisions are subject to reversal and change which makes majority rule tolerable. If there were policy areas in which specific majority groupings would have identical orderings of social alternatives, then, rather than declaring these preferences as sacrosanct, "it would become necessary to impose additional restraints upon the exercise of majority decisions".

For Buchanan, as for Wolff, unanimity is ultimately the only indisputably valid criterion for collective decisions. Unlike Arrow, Buchanan does not see the market mechanism as an alternative, equally defective way to make collective choices. Rather, the market mechanism provides a means for us to make individual choices without troubling ourselves with the problem of collective preferences:

> The consistency of market choice is achieved without the overruling of minority values, as would be the case if ordinary political voting were made consistent. Therefore, in a very

real sense, market decisions are comparable to political decisions only when unanimity is present. (Buchanan, 1954/1960, 89)

A similar line of argument is further advanced by Charles K. Rowley (1993; cf. also Rowley & Peacock, 1977), although he does not share Buchanan's belief in unanimity. For Rowley, as for Wolff, the fundamental lesson drawn from the Theorem is that democracy is deeply flawed:

> For others, like the author, who do not share the general optimism concerning collective choice processes, Arrow's contribution provides incontrovertible support for market process and encouragement for those who seek to constrain the range of collective choice to the limited functions of the minimal state. (Rowley, 1993, 8)

Both Rowley and Buchanan emphasize that markets are *not* collective choice-processes in Arrow's sense. For them, the Theorem shows the futility of any attempt to find 'rational' ways to rank alternative social states.[2] There is, however, an interesting difference: While Buchanan sees Arrow's search of "collective preferences" as an essentially misplaced and irrelevant starting-point, for Rowley the failure of this search constitutes itself a *positive* argument for markets.

The simple contrast between non-political markets and political collective decisions drawn by Buchanan and Rowley is dependent on several suppositions. First, "the market processes" in question have to be economists' ideal markets, not the imperfect markets which confront us in real life. In the ideal markets, competition is unrestricted; there are no externality problems, and no public goods proper. In contrast, real-life markets with restricted competition and externalities are potentially vulnerable to similar cycles as democratic processes. Second, in the ideal markets, the rules of the game are supposed to be pre-established and uncontroversial. In contrast to real life, there is no constant need to interpret and revise the rules of property and contract. Third, the initial distribution of market assets is pre-given and not a subject of any political controversies. In such a world there would be very little room for politics and the use of binding collective procedures, and consequently, for any paradoxical situations arising from the procedures. However, this does not mean that ideal markets are somehow able to transcend Arrow's result.[3] Even ideal markets violate the independence requirement (*contra* Arrow, 1967, 16). Consumers may prefer product *x* to product *y*, but increased demand of a third product *z* may change the preference between *x* and *y*, if, for example, it causes a change in the price of *x*. More importantly, although *ideally* free markets necessarily lead to some Pareto-optimal situation, there are many such situations. Free markets have to violate path-independence because the market outcomes—the choices between the Pareto-optimal situations—depend on the resources of the actors, and they, in turn, depend on earlier outcomes and

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[2] See also Lepage (1982, 95): Arrow's Paradox shows that "absolute democracy does not (and could not) exist; it casts suspicion on what emanates even from a 'democratic' state. It is a weapon against all 'statist' 'ideologies'."

[3] Arrow himself clearly thought that his impossibility result applies equally to market mechanisms. See Arrow (1951/1963), 1, 2, 5, 18, 59, and 110.

ultimately on the initial distribution. Given the above, it is not easy to see Rowley's point. The Theorem shows that collective choice rules as the majority rule do not satisfy certain requirements. If markets are no better in this respect, how can the Theorem provide support for them? Rowley and Buchanan argue that markets are not collective choice mechanisms, but if they nevertheless insist that markets are, in some sense *effective*, markets must be representable as choice functions. Arrow's problem can be avoided only by giving up *all* end-state evaluations of market outcomes. Very few economists, even in the neo-liberal camp, are willing to abandon completely the idea that markets are effective in some sense, and with it, all discussion about externalities or public goods. Of course, free markets may have additional positive properties *unrelated* to the requirements of the Theorem, but so may have other procedures, including the majority principle.

In Buchanan's case, his market idealism is reinforced by the idea of the unanimity procedure as a collective equivalent of the market mechanism (see also Buchanan & Tullock, 1962). Unanimity requirement is, of course, the most conservative rule one can find, and can be justified only if the *status quo* is seen as being as almost the best of all possible worlds. In any non-ideal world, a unanimity requirement is likely to create strong incentives for preference misrepresentation. Under a (non-neutral) unanimity rule, every decision-maker has a veto over any attempt to move from the existing *status quo*. Only Pareto-improvements—changes supported by someone and opposed by no one—are allowed. In free markets, in contrast, the agents have no veto. If, for example, there are not enough customers (with money), a local village shop has to be closed, and the villagers have to go to a supermarket five miles away. (*Pace* Buchanan, markets "overrule minority values" all the time![4]) If the situations before and after closing the shop are both Pareto-optimal, the move from one state to another cannot be unanimously approved. Under a unanimity rule, everything depends on the nature of the *status quo*. Suppose that the villagers have a veto over closing the local shop. Such a veto right would obviously invite strategic calculations: the owners of the supermarket have to buy off the villagers, and the latter would have a motive to make their consent as expensive as possible. In ideally free markets there is no room for such strategic behaviour. Thus, ideally free markets are essentially *unlike* unanimity rule.[5] Unanimity rule in collective decision-making is not analogous to ideally free markets but rather to a multilateral monopoly-situation.[6]

Finally, what should be said about Buchanan's methodological starting point? Several authors who cannot in any way be associated with organic or collectivistic

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[4] "The market is a procedure to decide among conflicting claims, admitting some while ruling out others. The goods go to those able and willing to pay for them." (Kley, 1994, 207).

[5] To quote I. D. M. Little "No change of any significance in the real world could ever be made without harming some people". On the differences between the unanimity rule, the Pareto principle and market exchange, see Dougherty and Edward (2005) and Sobel (2006).

[6] Indeed, Pierre Favre (1976, 64) discusses the opposite interpretation: the market outcomes may be imposed even against unanimous preferences if the rules of the market are themselves accepted as fair.

theories of State—Buchanan's *bêtes noires*—have argued that in many contexts it is perfectly appropriate to speak about actions and choices being undertaken by groups and organizations (Bird, 2000; Copp, 1995, 152–153; Levi, 1986, 153; Pettit, 2001). Economists routinely attribute preferences, ends, actions and choices to firms and households, and some of the most interesting applications of the rational choice methods to politics extend such attributions also to governmental agencies, parties, and states. If collectives are able to have aims and to act according to them, they are potential subjects of normative evaluation. As such, there is nothing improper in calling a collective choice or a series of such choices "rational" or "irrational". Indeed, it is difficult to imagine how we could do without such judgments. As I have already indicated, we may well think that political choices made in the name of and on the behalf of the public should sometimes be submitted to *stricter* rationality requirements than our private choices. But, of course, it does not follow that those particular conditions formulated in the social choice theory (for example, transitivity and its conceptual relatives) are necessarily a part of this institutional rationality; and even if they sometimes are, their relevance may vary from context to context.

5.1.3 Arrow's Theorem and the Radical Critique of Liberal Democracy

Both Wolff and the theorists of free markets can avoid the problems of social choice only by abolishing politics altogether from their ideal models. But writers at the other end of the political spectrum have also appealed to Arrow's results. Thus, the radical political theorists Barbara Goodwin and Keith Taylor saw in the impossibility theorem a justification of Utopian politics:

> We can argue on this basis that, in a heterogeneous society with a variety of tastes and preferences, the people could never 'choose' an ideal society through the aggregation of their individual preference orderings. The delineation of a utopia in everyone's interests, and *a fortiori* its implementation, would have to be 'imposed' or 'dictatorial'. (...) In Arrow's terms, then the utopian could be regarded as the spokesman for collective rationality, the creator of the social welfare function (...). In the circumstances it would be irrational for him to attempt to consult and aggregate the preference orderings of the potential inhabitants of utopia in drawing up his plans, particularly if he follows Rousseau, Fourier and Marx in believing that corrupt social institutions pervert men's desires and hence their preference orderings. But even if he merely takes men's present interests as permanent, the problems of intransitivity and the conflict of preferences would make accurate aggregation impossible. Also, at the risk of seeming paternalistic, we would suggest that the Good which utopia incorporates has dimensions beyond men's immediate, felt desires, and that this Good could be referred to as the 'collective rationality'. The method for devising a theoretical utopia is therefore the elaboration of collective rationality (or the common good) as analyzed by the utopian and the method for realizing this objectively and benignly defined collective good must be its imposition without consultation of personal preferences, since these would lead in diverse and contradictory directions.

'Imposition' here could range from implementation without consultation or acquiescence of individuals to coercion if necessary. (Goodwin & Taylor, 1982, 215)

I think that this argument deserves to be quoted extensively, for the quoted passage contains a subtle truth mixed with a potentially dangerous misunderstanding. It reveals the deeply ambivalent nature of Arrow's result. It is quite true that the Theorem has important consequences in respect of our conceptions of common good. It seems to show that aggregation of individual preferences cannot replace ethics; we are bound to make substantive value judgments. Perhaps it is also true that we cannot have a *stable* political community without some shared conception of the general good (Weale, 1984, 385). However, even if social ethics cannot be a matter of mechanical aggregation, it does not follow that we are therefore free to impose our own value judgments upon other people. We still need legitimate procedures to make practical decisions. Goodwin and Taylor do not tell what utopists should do when *they* happen to disagree between themselves (for example, on the question of whether to follow Rousseau, Fourier, or Marx). The contrast between the Wolff-Rowley view and the Goodwin-Taylor view is rather illuminative. In the former view, the central message of Arrow's theorem is that because democratic aggregation of opinions is sometimes impossible, all collective decision-making methods should be abandoned. In the latter view, this difficulty justifies the imposition of collective decisions by undemocratic means. In both cases, the theorists' favourite political ideal is simply prescribed as a solution to Arrow's problem.

Another, equally illuminating radical treatise utilizing the social choice results is Andrew Levine's Marxist work, *Liberal Democracy. A Critique of Its Theory* (1981). According to Levine, the social choice problems are not relevant in all forms of democracy. Rather, they are fatal for the bourgeois democracy defended by liberal democrats from the times of the US Founding Fathers to the present day. In the liberal democracy, the central problem is how the different interests could be combined to form the common interest. Majority rule is supposed to do the job. After presenting the results of Arrow and Sen, Levine concludes:

It does appear, then that the mechanism for combining interests proper to liberal democratic theory, majority rule voting and its close approximations, is profoundly defective. Plainly, the bearing of this conclusion on the core of the theory is devastating. The democratic component cannot be relied upon to do what its defenders claim for it. (...) These demonstrations of incoherence must somehow be addressed. *A political theory that passes it over is like a system of applied geometry that countenances circles that can be transformed into squares. The theory may be workable under some conditions or for some purposes. But it is fatally flawed.* (Levine, 1981, 61; my emphasis)

According to Levine, liberal democracy conceals the problem through relying entirely on representative mechanisms; but by accepting this *de facto* sovereignty of the representatives it actually betrays the democratic creed. While Levine's critique of representation is interesting, it does not make clear how the institutions actually "conceal" the problems revealed by Arrow and Sen problems, and it is even less clear (at least for me) how the radical democratic-Marxist institutions preferred by Levine can solve the problems in a truly democratic way. The most plausible

interpretation seems to be that in a classless society, a near-unanimous or at least a single-peaked General Will is bound to emerge in (almost) every issue. The most illuminative part of Levine's argument appears in the emphasized part of the quotation. For Levine, as for Wolff, the impact of the impossibility results is that they reveal a *contradiction* in the prevailing theory of democracy. A contradictory theory should, of course, be rejected. And because the existing democratic practices are seen as applications of that theory, they rest on a shaky foundation. The impact of Arrow's theorem is that it *disproves* democracy—it shows that democracy is, "strictly speaking, impossible" (Runciman) or "fatally flawed" (Wolff and Levine). The problem with this conclusion is not just that democracy is equated with majority rule. Behind this argument lies a definite view of the nature of the justification of institutions. First, the *empirical* likelihood of the problematic situations is not seen as relevant; hence, it is not even examined, for the problem is seen as just a logical contradiction inside a deductively closed theory. Second, it is supposed that the acceptability of democratic institutions depends on a single justification which is found wanting. In this view, democratic institutions are flawed because they are seen as an application of a single flawed theory. The justifications of democracy form a chain which is as weak as the weakest link, and not a rope in which several intertwined arguments may partly support each other.

Against the first aspect of these views, one can claim that normative-political systems are *not* like theories of geometry. They cannot, of course, tolerate plain contradictions; but they can allow *conditional* incompatibilities. A legal system, for example, may tolerate two norms: "If p is the case, q ought to be done" and "If r is the case, q ought not be done" even when it is, in principle, possible that p and r could emerge simultaneously and produce a situation in which q ought and ought not to be done. If the possibility of such a situation is judged as extremely unlikely, people living under the legal system need not bother them about the issue. Even if a democratic system may under some conceivable circumstances lead to results which are incompatible with its background justifications, the seriousness of this flaw is wholly dependent on the probability of its actualization. Against the second aspect, one may accept that certain *justifications* of democratic institutions are fatally flawed, but because the democratic institutions seem to work reasonably well (at least, when compared to non-democratic institutions), one should try to find other justifications which might be immune to the criticisms based on the results that impressed Wolff, Rowley, Goodwin, Taylor, and Levine. Well-established social practices are not to be changed just because some theoretical justifications discussed in philosophical discourse are found to be flawed. The social-choice results *may* force us to change our view of democracy and of its merits. They *may* lead to a re-interpretation of the existing democratic practices, and, because democracy is both a method and an ideal, they *may* also force us to change some parts of the ideal. But a single counter-argument alone cannot lead to the rejection of democratic practices, for the legitimacy of democracy has never been based on a single argument. This, indeed, is also the response of William H. Riker, as formulated in his main work (Riker, 1982). Significantly, most of his critics agree with him at least on this point.

5.1.4 An Interim Summary: For and Against "Individualism"

In her highly critical (although not entirely hostile) history of the origins of "Rational Choice Liberalism", S. A. Amadae owes a whole chapter to Arrow's *Social Choice and Individual Values* (Amadae, 2003, 83–132). Amadae undertakes a difficult task by trying to give room both to externalist and to internalist explanations[7] when constructing her narrative. The main theme of her book, however, is an externalist one: the rationalist theories in political science have been developed—at least in the United States—mainly as responses to the political and ideological threat posed by the Soviet Union and by the Communist ideology. There is certainly some truth in this. However, Amadae's account of Arrow's work is somewhat ambiguous. She argues that the *conditions* of Arrow's Theorem played "a central role in defining the Cold War consensus on the philosophical foundations of economic and political liberalism" (Amadae, 2003, 112; cf. 116). According to Amadae, Arrow's theorem "rejects the possibility that a social consensus on ends could emerge as a result of a philosophical ideal transcending individuals' desires as a guide to collective decision-making" (p. 114). Arrow's set-theoretical proof is said to undermine the philosophical systems of Rousseau, Kant and Marx. Arrow's "philosophical position clearly reflects an attempt to erect a basis for American economic and political liberalism" (*idem*). Particularly important is his "condition of citizens' sovereignty" which leaves out "such preference-altering considerations as advertising, propaganda and deliberation" (p. 108). In this condition (more often called the non-imposition condition, implied by the Pareto/unanimity condition), the methodological individualist philosophy is embodied (p. 111).

It is not easy to grasp the dialectics of Amadae's narrative. She is quite correct in emphasizing the philosophical aspects of Arrow's work. What is surprising is that she almost completely ignores the implications of the conclusion of Arrow's derivation and concentrates on its premises. The famous theorem is, after all, an *impossibility* result! One may claim, with some reason, that Arrow's choice of the premises reflected his commitment to liberal-democratic values. However, if what he actually showed was that one could derive a *contradiction* from the premises—which, according to Amadae, are "the foundation stones of the emerging Cold War consensus" (p. 116)—how could his work nevertheless *support* that consensus, as Amadae asserts? If, as Fred Frohock (1987, 53) states, "all four of Arrow's explicit conditions (. . .) are features of a liberal society", is the main message of *Social Choice and Individual Values* that liberal societies are trapped into an unavoidable contradiction?

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[7] "Internalist" and "externalist" explanations are both used in the modern historiography of science. Roughly, internalist explanations refer to science's own dynamics while externalist explanations refer to extra-scientific social, political and ideological factors.

As we have seen, Arrow's result has actually been understood in very different ways. My own interpretation of the reception of Arrow's work is a more internalist one. Political scientists, economists and philosophers became gradually interested in the implications of the Theorem, accepted it as a classical result, and finally delivered the Nobel Prize to its inventor, mainly because they honestly recognized it as an intellectually interesting problem. I do not deny that there may be an ideological aspect involved in this recognition. Because the problem arose from highly theoretical considerations and because it was formulated in abstract and formal (but not too difficult) language, it could be dealt with, comfortably, as an interesting theoretical challenge rather than as a devastating external criticism of liberal-democratic theory and practice. It may be argued that the enormous efforts used in trying to respond to the challenge posed by the Theorem are actually not worthy of it. The really burning problems of democracy may be elsewhere. In this limited sense Arrow's work may also have served an ideological function. However, to criticize Arrow's work simply as a sort of apology for Cold War liberal democracy is, I think, deeply misleading.

In their extensive critique of the social choice approach, Pildes and Anderson (1990) describe the Theorem simply as an apotheosis of *methodological* individualism. They argue that "social choice theory is little more than an exploration of the conditions under which the theory of rational choice for individual can be applied to groups". From this it follows that, "in criticizing rational choice theory as it is applied to individuals, we are criticizing the foundational assumptions of social choice theory" (Pildes & Anderson, 1990, 2177, fn. 139). According to these critics. social choice theorists "assume that the single goal of political institutions is the maximization of social welfare". (ibid. 2190) However, Pildes and Anderson are simply wrong in their critique: there is no reason to saddle the theory of social choice with any particular conception of politics or of individual action. This is witnessed by the various, mutually contradictory attempts to interpret the central message of Arrow's work discussed above. We have already seen that there are at least four possible ways to decode the meaning of the Theorem. True, many theorists have seen the Arrovian result as a triumph of individualism and a conclusive refutation of all seemingly anti-individualistic notions of "common good", as well as its conceptual relatives like "general will", "will of the people", "public interest", "social welfare", etc. (Feldman, 1980, 191; McLean, 1991, 509; Ordeshook, 1986, 65; Plott, 1976, 525; Riker, 1982, 137; Shepsle & Bonchek, 1997, 193–194). For others, however, the very meaning of the result is just the opposite. For example: "Social preferences cannot be reduced to individual preferences and *vice versa*. (…) Therefore, the impossibility theorem can be understood as an argument *against* methodological individualism in its extreme form." (Roos, 1973, 157; my emphasis)

Further, some of Arrow's critics think that the whole problem revealed by the result is actually a pseudo-problem, arising from Arrow's *over-individualistic* presuppositions (Amadae, 2003; Frohock, 1987). Finally, some committed methodological individualists like Buchanan think that the whole problem of preference

aggregation is a pseudo-problem for the very opposite reason. These authors want to remind us that

> the very use of the phrase 'social welfare function' suggests that if such were possible, then somehow an objective moral code would have been erected. (. . .) Arrow's problem clearly has so much in common with Rousseau's that it seems worth while to point out again the insidious danger of this approach. Modern totalitarian philosophy may be not altogether unjustly fathered on Rousseau. (Little 1952/1973, 148–149; cf. Moberg, 1994, 70–74)[8]

Thus, Arrow's result has been seen as a healthy cure, or an unhealthy germ, or a part of the disease it is supposed to cure. We may summarize these different reactions to Arrow's result:

	Arrow's theorem is politically and methodologically	
	Relevant	Irrelevant
Because it is seen as		
A consequence of individualism/liberalism	Riker (1982)	Frohock (1987)
	Rowley (1993)	Amadae (2003)
Incompatible with individualism/liberalism	Levine (1981)	Buchanan (1954)
	Goodwin and Taylor (1982)	Little (1952)

This summary does not exhaust all the politically relevant interpretations of Arrow's result provided in the contemporary literature.

5.2 Riker's Challenge

5.2.1 Introduction to Riker

William Riker's *Liberalism against Populism* (1982) is certainly the most influential attempt to combine the social-choice approach with a normative study of democracy. It is the first book-long monograph exclusively devoted to this subject. Most of the work done on the subject after 1982 consists of reactions to Riker's pioneering study. For example, Gerry Mackie's large work (2003) is essentially an attempt to explicate Riker's theory and to refute it point-by-point. Anthony McGann's brilliant study (2006) is another attempt to respond to Riker.

In his work, Riker tries to show that because of the logical properties shared by all democratic decision-rules and revealed by the social choice theories democratic

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[8] Lepage (1982, 95) tries to have it in both ways. On the one hand, Arrow has shown that "absolute democracy cannot exist". On the other hand, his result may justify the power "of an elite which represents 'the public interest' ". Lepage's little book (published originally in French, 1978) is interesting in this context. Unlike the works reviewed by Amadae in her critical history, it has no scientific pretensions. It is a pure Cold War product: an attempt to sell the Public Choice approach to the Europeans as an effective antidote against Socialism.

procedures tend to produce results that are either arbitrary or manipulated. This justifies a skeptical attitude:

> Outcomes of voting cannot, in general, be regarded as accurate amalgamations of voters' values. Sometimes they may be accurate, sometimes not; but since we seldom know which situation exists, we cannot, in general, expect accuracy. Hence we cannot expect fairness either. (Riker, 1982, 236)

In this argument, lack of fairness is the central problem. The main conclusion, however, is not just that fairness is missing. His starting-point is the claim that there are two, and only two, equally influential but fundamentally incompatible justifications for democratic institutions. Both are based on certain interpretations of current democratic practices; both contain an ideal of a democratic society. According to the *populist* view, democracy is fundamentally a matter of finding and implementing the will of the people. All deviations from this norm are, at least *prima facie*, undemocratic and unjust. The most reliable way of finding the will of the people is to use the simple and unlimited majority rule. This omnipotence of majorities can be justified in different ways: it can be based on metaphysical and collectivistic notions of self-government, or on an epistemic belief that majorities are generally right in moral issues. It can also be based on a relativistic background supposition that in the world of conflicting opinions there is no guide on matters of social morality except the opinion of the majority, or, finally, on the (fallacious) inference that the maximization of welfare, freedom, autonomy, or some other generally shared and important value leads to majoritarian conclusions (Riker, 1982, 11–16; 1992, 102–103). It should be noticed that the term "populism" as used by Riker does *not* refer to the ideologies of those contemporary parties labeled as populist (although some of them may contain elements also recognizable in Riker's description). A less elegant but also less ambiguous term for Riker's "populism" would be "unqualified majoritarianism". Here, however, I follow Riker's usage. "Populism", thus defined, may be compatible with different philosophies. However, according to Riker they are *all* misguided.

The *liberal justification* of democracy, according to Riker, is that democratic institutions are simply the most reliable means for modern societies to prevent tyranny and to protect the most important social value, i.e. individual freedom. The results produced by democratic institutions do not have any deeper meaning or justification; the (largely unintended) long-run consequences of providing a justification for democracy and indirectly legitimizing individual democratic decisions. Democratic institutions make a permanent use of tyrannical power impossible *for the very reason* they tend to work in a random and arbitrary way (Riker, 1982, 241–246). An illuminating example of this is the fate of the late Prime Minister Indira Gandhi of India. During the Emergency Rule, she tried to extend her power (and that of the Congress Party) far over the limits allowed by liberal democracy. She was, however, ousted by a coalition of enemies united only in their opposition against her. The coalition was unable to govern, and the Congress returned to power, but Mrs. Gandhi's attempt to establish a form of elected dictatorship was defeated (Riker, 1982, 244). The two conceptions of democracy, populism and

liberalism, are, according to Riker, mutually exclusive and jointly exhaustive. The philosophical importance of the results produced by the social choice theories is that they indirectly demonstrate the superiority of the liberal conception of democratic institutions. They demonstrate it by showing that the populist alternative is "inconsistent and absurd" (p. 241).

Here I shall try to disseminate Riker's arguments one by one. It is important to notice that, although Riker relies on the results of the theory of social choice, all the conclusions drawn by him are dependent on his own political philosophy. More exactly, apart from the formal results, he needs both ethical and epistemological premises to prove his case. It is, therefore, highly misleading to argue that "the theory of social choice has proved" Riker's conclusions, or that "the theorists of social choice" are bound to think that populism is inadmissible. The formal results are just formal results; they do not dictate any particular interpretation. However, the interpretation provided by Riker is more nuanced than most, and unlike many of his predecessors and some of his followers, he has tried to combine his interpretation with empirical results as well as with a general philosophical view on the nature of democracy. This makes his interpretation worth a detailed treatment.

5.2.2   Riker's Challenge: Non-uniqueness

Why Riker does see democratic decisions as meaningless, arbitrary and/or unfair? The first argument deals with the *non-uniqueness* of democratic methods of decision-making. Following many other democratic theorists, Riker argues that in the case of two alternatives, majority rule is fair because it does not favour any particular voter or option. This fairness is captured by May's anonymity and neutrality conditions (Riker, 1982, ch. 3). But, as we have seen, there is no simple way to generalize from May's theorem to cases in which there are more than two options to be voted on. There are numerous *prima facie* rational and fair ways to vote when the number of proposals or candidates is greater than two. However, any method that reduces the alternatives to two violates fairness (pp. 63, 65). As Riker says

> when many candidates for an office are winnowed down to two by some nominating procedure (. . .) some candidate actually preferred to all other by a majority of voters may nevertheless be eliminated in the nomination process. (Riker, 1982, 21)

To summarize the *non-uniqueness argument*:

(A)   (1) There exist a variety of methods by which the values of decision makers may be incorporated into the social choice.
(2) These methods may produce different outcomes from the same set of individual values.
(3) An outcome is legitimate if it is produced by a fair method.
(4) Different methods embody different principles of fairness.
(5) No method embodies all the principles.

(6) The principles are of equal importance.

Ergo   (7) There is no ethically superior (that is, fairest) method.

Ergo   (8) Different outcomes resulting from the same set of values can be equally
legitimate. (On this argument, see Riker, 1982, 112–113, 234; 1984, 106)

Premises A(2), A(4) and A(5) of the argument have been proved in the theory of
social choice. Premises A(3) and A(6) contain substantive ethical commitments.
Premise A (3) commits its defenders to *proceduralism*: Democratic decisions are
justified in terms of the fairness of procedures, not in terms of the consequences of
decisions. Riker regards populism as a proceduralist theory. In his view, a populist
justification of a procedure depends on the nature of the mapping from the decision-
makers' preferences—typically, the majority preferences—to the outcome. The
purpose of the argument is to show that, ultimately, proceduralism is not viable.
In order to show this, Riker also needs premise A(6). If some ethical criterion (or a
set of mutually compatible criteria) were superior, a proceduralist would not be
disturbed by the fact that there are possible methods of decision making that do not
embody these criteria (Riker, 1982, 41). For example, if the Condorcet criterion is
seen as all-important, the fact that decision-making methods satisfying this criterion
do not necessarily select plurality winners or Borda winners is ethically irrelevant.
Thus, when accepting premise A(6), Riker is making an ethical judgment that may
be challenged. The question is whether the various criteria used in social choice
theories (neutrality, monotonicity, the Condorcet, Borda, and plurality criterion,
etc.) are equally justifiable principles of fairness as A(6) indicates. As we have seen,
their status is not unambiguous. But their mutual incompatibility is simply a matter
of fact. As Riker says

> A good argument can be made for the fairness (...) of (...) most methods. The difference
> among the methods is simply that they are fair or efficient in different ways because they
> embody different ethical principles. (Riker, 1982, 234)

According to the first argument (A), there is no ethically superior method of
making decisions. According to the second argument, we cannot usually *know*
whether an outcome is produced in a way which is compatible with a given ethical
principle (Riker, 1982, 235–236). "Doubtless the results are often fair and true, but,
unfortunately, we almost never know whether they are or not" (p. 113). In a more
precise form:

(B)   (1) Different methods are fair in different ways because they embody
different principles of fairness.

(2) No method embodies all the different principles.

(3) For most of the methods in wide use, not enough information is
collected to reveal how the outcome differs from the outcomes that might
have been produced by methods embodying other principles.

Ergo   (4) In most cases, we do not know whether an outcome is produced in a way
which is compatible with a given ethical principle.

To take an example, because the plurality rule pays attention to voters' first preferences only, we cannot know whether a candidate elected by a mere plurality is a Condorcet winner or not (Sect. 3.2.2). If the Condorcet criterion is ethically superior to the plurality criterion (cf. premise A(6)), we cannot tell how fair the election actually was.

5.2.3 Riker's Challenge: Lack of Fairness

The most dramatic examples of results without an ethical justification are those produced in cyclical situations. For an extreme "populist" these examples seem to be fatal because they show that in some cases there is no unique popular will when the "popular will" is simply interpreted as majority preference (Riker, 1982, 236–238; 1984, 106–108). This is certainly the most discussed of all "social choice" arguments in political theory.

(C)   (1) Social choices should be based on the will of a majority revealed through a fair amalgamation of voters' values.
(2) In some cases (the cyclical cases) a fair amalgamation of voters' values does not reveal a unique will of a majority.
(3) In those cases, only an unfair (for example, dictatorial) method leads to the formation of a unique will.

Ergo (4) In some cases, either we cannot make the social choice or it has to be based on an unfair method.

Any attempt to escape from the paradox would constitute a violation of some democratic principle. To quote Riker:

> When institutional stability is imposed on what would otherwise be a disequilibrium of tastes, the imposed equilibrium is necessarily *unfair*. That majority which would, were it not institutionally restrained, displace the current outcome is denied the opportunity to work its will. In that sense institutional stability (…) is unfair and is sure to cause frustration. (Riker, 1982, 192; my emphasis)

Riker mentions two troublesome aspects of Condorcet-cycles: first, the outcomes tend to be *unstable*, second, insofar as they are stable, their stability results from institutions which favour some alternatives (and their supporters) in an unfair way. In Riker's theory, the argument becomes more sinister when it is combined with arguments (A), (B), (D) and (E); together they imply, not only that paradoxes are possible but that the paradoxical cases cannot be isolated and treated separately. Second, there is no reliable method of identifying the paradoxical cases. Many existing methods do not reveal the cycles when they exist exogenously (argument B); moreover, politicians can *create* cycles for strategic reasons (arguments D and E below). All this is related to the observation we made before: while social choice functions aggregate preferences, the real-life institutions can aggregate only more

or less complete and honest *expressions* of those preferences, that is, votes. Due to the (A)-problem, different ways to handle real or contrived cyclical preferences may produce different outcomes.

5.2.4   Riker's Challenge: Manipulation and Instability

The *argument from strategic voting* is based on the manipulability theorems (Riker, 1982, 167–168):

(D)   (1) All methods can be manipulated by strategic voting, for example, by voting against one's true values.
(2) We can never know with certainty what voters' true values are.
(3) We can never know with certainty whether an outcome resulted from manipulation or not.
(4) An outcome resulting from manipulation is ethically meaningless, because it does not result from a fair amalgamation of voters' true values.
(5) We can never know with certainty whether an outcome is ethically meaningless or not.

Ergo   (6) We have to treat all outcomes as ethically meaningless.

Riker's conclusions are deeply skeptical: because we cannot know whether an outcome results from strategic voting, and because strategic voting is considered unethical, we cannot distinguish between ethically meaningful and ethically meaningless outcomes. We have learned that all voting rules violate the independence requirement, and this makes them vulnerable to manipulation by voting.

The fifth argument (E) proceeds like (D). It starts from the finding that all democratic methods of social choice violate the requirement of path-independence. Therefore, they can be manipulated by the controllers of the agenda.

(E)   (1) Decisions could be made from only some pre-given agenda (that is, from a finite set of options which are considered in some pre-determined order).
(2) All methods can be manipulated by changing the agenda (for example, by contracting or expanding the set of alternatives or changing the voting order).
(3) We can never know with certainty what voters' true values are.
(4) We can never know how they would have voted had the agenda been different.
(5) We can never know with certainty whether an outcome resulted from manipulation or not.
(6) An outcome resulting from manipulation is ethically meaningless, because it does not result from a fair amalgamation of voters' true values.

Ergo   (7) We have to treat all outcomes as ethically meaningless.

This form of manipulation is equally undetectable (Riker, 1982, 236–238). The conclusion of argument (E) is the same as that of argument (D): because we cannot distinguish manipulated outcomes from non-manipulated ones, *all* outcomes are ethically meaningless. Again premises D(1) and E(2) are based on results which can be proved, while D(4) (= E(6)) is an ethical premise. Premise D(2), however, is an *epistemic* premise, and a controversial one. Riker puts it like this: "Since we can never be certain what 'true tastes' are—all we ever know are revealed tastes—we can never be certain when voting is strategic".

Riker may now rest his case against the populist interpretation of democratic choices. According to the populist interpretation, there *always* exists a *unique* popular will which is based on a *fair* amalgamation of individual values. This popular will is revealed in a voting outcome resulting from the use of the fairest method. And because this outcome reveals the popular will, it has a unique ethical meaning and should be implemented. But argument (A) shows that there is no single "fairest" method of aggregating preferences. Argument (B), in turn, shows that any outcome can result from a process which violates some requirement of fairness. Argument (C) reminds us that the will of majority does not exist in all cases; "the popular will", "the general will" or "the general interest" cannot be reached simply by counting votes. Finally, arguments (D) and (E) show that, whatever method we choose, and even when there exists a will of the majority, outcomes can still be "ethically meaningless" because they are dependent not only on voters' values but also on their strategies, and we have no way of reaching their values except through some voting method. These arguments, while based on the central results of social choice theory, are conceptually independent of each other. The Condorcet paradox, which constitutes argument (C), and which aroused the attention of earlier commentators, is one, but only one situation in which strategic voting (D) and agenda manipulation (E) are possible. Arrow's generalization of the paradox[9] is one of the incompatibility results that motivate non-uniqueness arguments (A) and (B). However, arguments (A), (B), (D) and (E) would constitute a potential problem for a populist even if the Condorcet paradox as well as Arrow's generalization of it could be ignored. Non-uniqueness and manipulation might well be problems even if there were no preference cycles. The potential contribution of the social choice theory to the philosophy of democracy is not reducible to the problem of majority cycles.

Arguments (A)–(E) mutually support each other without being reducible to a single argument. To summarize the entire idea, any outcome results from the interplay of voters' values, voting strategies, the amalgamation method, and agendas, and we have no way of knowing what is the role of each factor in the production of a particular outcome. And because there is no access to the popular

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[9] Strictly speaking, Arrow's result is *not* a generalization of Condorcet's paradox. The latter is less general in the sense that it concerns only the majority rule. However, unlike the former, it does not require full transitivity; acyclicity is sufficient to generate the "paradox".

will independent of strategies, methods and agendas, there is no basis for supposing that any conceivable outcome would have a unique ethical value. In short:

> If the notion of the popular will is itself unclear, then what the people want cannot be social policy simply because we do not know and cannot know what people want. (Riker, 1982, 238)

5.3   Some Responses to the Rikerian Thesis

The starting point of the whole discussion has been Riker's distinction between "populism" and "liberalism". But how useful this distinction actually is? Are the categories mutually exclusive? Do they exhaust the field of possible justifications? And, most importantly, does Riker's liberal alternative really survive his own anti-populist arguments (A)–(E)? One problem with the earlier interpretations of the Arrovian results, for example of those put forth by Wolff, Rowley, Levine, Goodwin and Taylor (Sects. 5.1.1–5.1.3), was that they did not really tell how the favoured arrangements (anarchy, free markets, Utopian leadership, socialist democracy) would avoid the supposedly destructive consequences of Arrow's result. Does Riker's "liberal democracy" perform any better in this respect? Can the liberal do without fairness, responsiveness, or popular will?

5.3.1   Is the Meaninglessness-Thesis Compatible
with Liberalism?

Let us start with the question of the validity of Riker's basic distinction. To put it politely, Riker's reading of the history of political philosophy is rather selective. It has been argued that Riker's notion of "populism" is actually a straw man which does not represent anyone's real view. This critique is parallel to the earlier discussions on Joseph Schumpeter's influential work, *Capitalism, Socialism and Democracy* (1942). In Schumpeter's case, many critics of his elitist interpretation of democracy argued that its target, the "classical theory of democracy" (a near relative of Riker's "populism") was an arbitrary construct (Pateman, 1973, 17–18). I think there is some truth in both accusations. Schumpeter's "classical theory" and Riker's "populism" do not correspond with any well-defined political theories. Nevertheless, they are not just straw men. Both are ideal types which make explicit some suppositions generally shared by politicians, journalists, and citizens in democratic countries. Everyday political rhetoric is full of "populist" and "classical" claims, and not only in Western democracies. The individual decisions and general policies of the State authorities are said to respect or not to respect the Will of the People. Elections and referenda are un-problematically taken as expressions of that will. Lakes of ink are spilled in discussing whether certain particular

institutions (direct vs. indirect elections of Presidents, proportional vs. non-proportional representation, representative institutions vs. referenda, term limits vs. no term limits, bicameral vs. unicameral legislatures, constitutional review vs. no constitutional review *etc*.) genuinely allow the expression of the popular will. The shared presupposition of all these debates is that at least sometimes the "will of the people" makes sense. All this discussion and propaganda is misguided if Riker's (or Schumpeter's) account of democracy is correct. At least in this sense, Riker's "populism" *is* an important viewpoint, a more influential one than the more coherent and sophisticated formulations of political philosophers.

However, in constructing his ideal type of populism, Riker confuses two versions of the "populist" thesis. The *extremist* version of the popular will thesis is that there is always or almost always a discoverable popular will and that an unambiguous expression of the will of the people should always be decisive. Consequently, the best political system is a system which always realizes this will. In order to be discoverable, this popular will must be equated with some concrete procedure, typically with a majority vote. In every important issue, the popular will exists and is accurately revealed by the correct procedure. This is "populism" in its pure form. In this version, direct majoritarian democracy is the ideal; all its limitations are deviations from it, and justifiable only as practical necessities.

The *moderate* populist thesis is that the will of the people is not meaningless. It does exist at least in *some* situations and can *sometimes* be discovered by democratic procedures. Furthermore, when it exists, it has *some* normative significance. "The will of the people", however defined, has only *prima facie* normative relevance which has to be weighed against other considerations such as moral rights, the rule of law, the international commitments of the state, and so on. This moderate populist thesis is compatible with the traditional liberal position—the position adopted by the Federalist authors, Benjamin Constant and Kant, among others. Consider the following formulation of liberal principles taken from Constant's *Principes de politique:*

> Our present constitution formally recognizes the principles of the sovereignty of the people, that is, the supremacy of the general will over any particular will. *Indeed this principle cannot be contested.* (. . .) But it is not true that society as a whole has unlimited authority over its members. (. . .) The assent of the majority is not enough, in any case, to legitimate its acts: there are acts that nothing could possibly sanction. (Constant, 1815/1988, 175–177; my emphasis)

Constitutional limitations of the majority rule—the separation of powers, bicameralism, qualified majorities, constitutional review by courts, *etc*.—are needed to protect liberty and other basic values even against (or especially against) a well-defined will of the majority. The traditional liberal-democratic doctrine, expressed by Constant, is a compromise between "populist" principles and the principle of individual liberty, not an outright rejection of the former. In spite of his official stand, Riker's liberalism has relatively little to do with this traditional liberal defence of anti-majoritarian institutions. The traditional liberal defence of these institutions is that by counteracting all majorities they also work as safeguards against intolerant or ill-considered majority will. Riker, by contrast, does not want

to limit the power of the majorities because the will of the majority may sometimes be unjust, but because the will of the majority has no moral meaning whatsoever. Unlike the classical liberal theorists, Riker does not see the traditional liberal or republican institutions as compromises between two competing principles which both have some *prima facie* validity.

For Riker, as for Schumpeter, the justification of institutions is a purely instrumental one. Both majority rule and its constraints are justifiable only because of their long-term consequences. Democracy is legitimate only because it tends to protect individual liberty, and it has this tendency precisely *because* it works in a capricious and unpredictable way. In Riker's words,

> All elections do or have to do is to permit people to get rid of their rulers. The people who do this need not themselves to have a coherent will. (...) The liberal interpretation of voting thus allows elections to be useful and significant even in the presence of cycles, manipulation and other kinds of 'errors' in voting. (...) The kind of democracy that thus survives is not, however, popular rule, but rather an intermittent, sometimes random, even perverse popular veto. (...) Liberal democracy is simply the veto which is sometimes possible to restrain official tyranny. (Riker, 1982, 244)

In a sense, even Riker's argument is dependent on the existence of a pre-given "common good" which is not simply a function of individual preferences. Liberty is not important only because many citizens happen to like it. Riker thinks that the realization of this common good is an indirect and largely unintended product of the liberal-democratic institutions.

One may ask whether a populist could also employ indirect arguments. Even if populist institutions were unable to reveal the "will of the people" directly, they might be seen as important for other reasons. This is the line taken by Coleman and Ferejohn (1986, 22):

> Voting, through meaningless in the sense of social choice theory, still strengthens allegiance, increases competence, develops a sense of community, and the like. All of these are virtues of electoral systems that populists have generally endorsed. Elections have good populist consequences.

Benjamin Radcliff (1992b, 517) makes a similar argument:

> If participation in the democratic process positively affects the human personality even when majorities fail to make 'intelligent' decisions, then surely these benefits also obtain when collective intransitivities do occur. Accordingly, the presence or absence of cyclical outcomes is irrelevant.

While such indirect justifications of populist institutions are incompatible with "populism" as defined by Riker, it may be argued that they preserve the essence of the populist philosophy: the principles of majoritarianism and of intense popular participation. The problem with this indirect populist strategy is that the supposedly good consequences of democratic institutions are likely to be dependent on the widespread *belief* that voting and elections are not meaningless. People are willing to participate in democratic politics, and tend to see democratically made decisions as legitimate mainly because they believe that the decision-making rules *are* fair, that the outcomes *are* meaningful, and that they themselves *have* some real

opportunities to influence outcomes by participating. Admittedly, by-products and unintended consequences may well be among the reasons that make democracy appealing at the *general* level. When constitution-makers argue about the merits and demerits of democracy and non-democracy, the effects mentioned by Coleman, Ferejohn and Radcliff may well be decisive. The point is, however, that these appealing effects may themselves occur only if people believe that there are more direct and more instrumental reasons to participate in democratic processes.[10] If voting outcomes are *always* meaningless, the populist virtues seem to be based on a Noble Lie.

The question is whether Riker's own version of liberalism can avoid the problem. If the aggregated voting results are meaningless as Riker claims, what rational motives people have to vote in a liberal polity? And why should people take collective decisions arising from such an arbitrary process as binding? Democracy is often supposed to provide (at least a part of) the answer to the traditional problem of legitimacy, but if democratic outcomes do not result from a rationally justifiable process, it becomes a part of the problem (Wolff, 1970/1976).

The difference between the traditional liberal justification of democracy and Riker's version is that traditional liberals nevertheless believe that majoritarian institutions have a disposition to punish bad rulers and reward good ones. In this way, democratic institutions make rulers *accountable* to the public. Accountability is one way to ensure democratic responsiveness. Therefore, at least a weak form of the "will of the people" still has a role in all traditional liberal theories: the notion of accountability is meaningful only if elections can be interpreted as relatively reliable expressions of public opinion, and people vote in a certain way because they believe that it is an effective means to get rid of the rulers. Riker, however, believes that democratic institutions treat all rulers—good and bad—with equal arbitrariness. His liberalism requires only that it be "*possible* to reject a putatively offending official" (p. 243; emphasis in the original). The claim that democratic elections have no deeper meaning whatsoever is almost as disturbing for a traditional liberal as for a populist. In both cases, the meaningless thesis is likely to destroy the central mechanism if it becomes generally shared.

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[10] In an article written jointly with Ed Wingenbach (Radcliff & Wingenbach, 2000), Radcliff tries to defend his participatory version of "populism" against critique of this type. The defence, however, is overkill. The authors present three separate theses: (1) "The sophistication encouraged by participation likely produces value-restricted preferences, rendering cycles impossible or improbable." (p. 993) (2) "[T]he participatory model (. . .) need not require the aggregation of preferences into a logically coherent public choice. The principal concern of the model is participation itself; it implies no special claims as to inherent morality or 'rightness' of the decisions reached via democratic procedures. (. . .) Accordingly, the presence or absence of cyclical outcomes is irrelevant." (pp. 986-7) (3) "[M]ajority cycling actually may enhance both the value and rationality of participation. (. . .) [D]isequilibrium provides crucial incentives for participation, given that outcomes can always be determined by politics." (988-9). Obviously, these three theses do not fit together. Cycles cannot *simultaneously* be impossible, irrelevant, and enhance the value and rationality of participation.

The incentive problem appears also at the other end of the democratic chain. Oddly, Riker claims that "an official who faces an electorate knowing that it sometimes works randomly and may 'unfairly' reject him or her has a powerful motive to try even harder to avoid offending voters" (Riker, 1982, 243). One would rather expect the opposite argument. If other factors other than the popular opinion may lead to an electoral loss, politicians are likely to pay more attention to those factors than to the popularity of their policies. Suppose, for arguments' sake, that losses and victories in general elections are purely random events, having *nothing* to do with politicians' performance. Clearly, a politician has no self-interested motive to try her best. If, as Riker says, "clever opponents might beat him or her by strategic voting or by manipulation of the agenda or by the introduction of additional, divisive candidates" (p. 242), a politician is likely to concentrate on these issues rather than on public policy (see Radcliff, 1993, 133). And if the citizens understand this, they may be less willing to play the game in the future.

Sean Ingham (2013) has argued that the consequences of Riker's arguments are actually *more* damaging to the liberal models of representative democracy—including Riker's own model—than to the models of direct democracy supported by Rousseau and other populists. If Riker is right in his arguments, political participation cannot have any instrumental justification, for its results are largely arbitrary and unpredictable. Participation cannot be a means to any rationally chosen end. However, versions of populist direct democracy at least retain the procedural principle of citizens' *equal control* over policy decisions, while the Rikerian indirect democracy delivers that power to the elite of representatives. Ingham admits, however, that "equal control" does not look particularly valuable if people are *always* unable to exercise it coherently. Hence, if Riker is right, his theory seems to pose an equally serious challenge to all versions of democracy.

5.3.2   Procedural Fairness and Social Choice

Procedural fairness has a central role in Riker's arguments (A)–(C). Nevertheless, he never defines this central concept. Actually, his view on political fairness seems to be troubled with an ambiguity. In the first chapters of *Liberalism against Populism* Riker does *not* argue that all "minimally fair" methods are *equally* fair. For example, he claims that simple majority decision in binary alternatives is, in principle, the fairest method. In practice, however, it becomes unfair because the options are usually reduced to two in some arbitrary way (p. 59). He also sees the Condorcet-criterion as an ethical (and not only practical) requirement (p. 100). At the end of the book, however, Riker gives the impression that the fairness of decision-making rules is simply irrelevant, occasionally putting words like "unfair" in inverted commas, and calling his own position "relativistic". In the articles published after the book (Riker, 1992, 1993; Riker & Weingast, 1988) he takes a further step. He argues that because there is no uniquely fair method, we may as well stop pursuing fairness and adopt methods that tend to protect individual

freedom even at the cost of fairness. The protection of the liberal *status quo* takes precedence over all fairness considerations. However, the recognition of the *prima facie* importance of fairness conditions was the starting point of his argumentation. Thus, his whole project becomes ambivalent.[11] Can we completely reject the idea that political fairness requires a determinate positive connection between the popular opinion and political outcomes? Can we completely abandon the traditional task of the theory of social choice, the search for a fair decision-making rule?

Generally, there are different views on what "fairness" requires in decision-making contexts and what should be its role in institutional design. Many democratic theorists who do not share Riker's minimalist liberalism do nevertheless share his view that procedural fairness is not an important property of democratic institutions. For example, Richard Arneson (2004) argues that fairness of procedures has *no* independent role in justifying institutions; we should choose institutions which tend to produce the best results. According to David Estlund (2008), "procedural fairness" consists only of an anonymity condition (or "blindness to personal features"). For him, all criteria which somehow connect decision-makers' preferences to outcomes are not about procedural fairness but about outcomes. Most notably, responsiveness (or monotonicity) conditions are not required by procedural fairness, for even procedures giving random or perverse responses but satisfying anonymity are "fair" because they do not favour particular persons or groups. Hence, a fairly organized lottery is always among the fairest procedures, for it ensures that personal features have no effect on the outcomes. Fairness is, then, a very limited property, and cannot help in choosing between alternative decision-making institutions (Estlund, 2008, 78–82). There must be something about democracy other than its fairness which guarantees its acceptability (p. 6). This, according to Estlund, is its *epistemic* value.

Unlike Estlund, and in a stark contrast with Arneson, Fabienne Peter (2007, 2009) defends what she calls "pure proceduralism". According to this view, "the content of the decisions does not receive independent weight in determining legitimacy" (Peter, 2009, 145). "Pure Proceduralist conceptions only impose conditions of political fairness on the democratic process and refrain from imposing conditions that refer to the quality of outcomes" (p. 153). Peter agrees with Estlund in that criteria which connect decision-makers' preferences to outcomes are not to be included into the notion of procedural fairness. Consequently, she classifies the collective rationality conditions (for example, transitivity, completeness, or path-

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[11] In his critique of liberal democracy, Andrew Levine (1981) actually presents the dilemma which emerges in Riker's work. According to Levine liberal democracy is an unstable compromise. Liberal democrats have to choose between liberty and majoritarianism. The social choice theorists have shown that majoritarianism (in its liberal form, as a method of satisfying interests) is conceptually incoherent. Therefore, liberal democrats have to opt for liberty. Liberal democrats, however, cannot afford to admit this. If this picture is accurate, Riker's works can nevertheless be exempted from this supposed liberal hypocrisy. Riker openly acknowledges the incoherence emphasized by Levine and declares that the traditional defenses of democracy, which are also part of the liberal tradition, are not viable.

independence) as outcome-conditions. She argues that if we accept her *purely* proceduralist justification of democracy, Riker's problems (A)–(E) become irrelevant. However, when confronting Riker's manipulability arguments (D) and (E), Peter is unable to stick to her pure proceduralism. She admits that "absence of manipulation is necessary for democratic legitimacy" but, at the same time, wonders "What would demanding consistency of the social preference ordering add?" (Peter, 2009, 154). The answer is that the two issues—absence of manipulation and consistency—are *conceptually* interconnected. The very notion of "manipulation" has to be defined in terms of input-outcome comparisons. The theory of social choice has proved that all voting procedures can be manipulated, and their vulnerability to "inconsistencies" (that is, cycles) is a part of that proof. Informally, an outcome results from manipulation if some actors consciously produce it either by voting against their true preferences (D) or by choosing a suitable agenda (E). This presupposes the meaningfulness of certain counterfactuals: different voting strategies and/or a different agenda would have changed the outcome at least in some cases. If "manipulation" can be defined only by referring to outcomes, absence of manipulation cannot be a part of the purely procedural criterion of fairness as defined by Peter. A simultaneous commitment to pure proceduralism *and* to an Estlund-like austere definition of procedural fairness which excludes all evaluation of the relations between democratic inputs and democratic outcomes is bound to create problems.[12]

In Charles Beitz's theory of democracy (Beitz, 1983, 1989) fairness appears as the central political value. However, Beitz is interested in substantive and general fairness rather than procedural and political fairness. While his general view is very far from Riker's, in his *Political Equality* (1989) Beitz actually subscribes to some Riker's central theses. Like Riker, Beitz rejects a proceduralist justification of democracy. According to him, "the appearance that social decisions lack 'meaning' is simply an artifact of adopting a conception of 'meaning' that is inapposite in the social realm" (Beitz, 1989, 71). This is the core of Riker's objection to populist (or, as Beitz says, "the popular will") theories. We saw, however, that while rejecting populism, Riker was still—somewhat ambiguously—willing to admit that *prima facie* the notion of procedural fairness made sense. Beitz, by contrast, seems to reject not only the notion of popular will, but also the notion of procedural fairness in democratic decision-making. Like Estlund, he thinks that there are "strong reasons to resist" the idea that "fairness consists in an appropriate relationship between individual preferences and social choices" (p. 57). As he says:

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[12] Peter discusses a possible counterargument to her pure proceduralism: Suppose that an apparently fair procedure produces a biased, for example, sexist outcome. Peter's answer is that "if the procedure is genuinely fair, one would thus not expect a sexist proposal to go through. (. . .) The illegitimacy of a biased outcome can be attributed to unfair procedures" (Peter, 2007, 346). This move undermines her idea of pure proceduralism. True, a biased outcome may well *indicate* that the procedure which produced it is not fair after all. But if the substantive incorrectness of an outcome is always *sufficient* to render a procedure unacceptable, the approach is no more a procedural one.

In the weak sense, the resolution of a social policy might be said to be 'based on' individual preferences just in case there is *some institutional connection* between the expressed political preferences of the people and the policies carried out by the government. (. . .) As a definitional matter, the concept of democracy, 'rule by the people' embodies only the weak view. (Beitz, 1989, 55; my emphasis)

Hence for Beitz, the lack of 'meaning' and fairness at the level of decision-making procedures are not even *prima facie* problems. His point is that the nature of decision-making procedures is but one aspect of political fairness of a society and its basic institutions. Without considering the entire context, we cannot say anything about the fairness of a particular decision-rule. This context-bound view of fairness contains an important point. For example, private firms, public organizations and international associations need fair and reasonable decision-making procedures, but "popular will" or an "equitable treatment of preferences" are not relevant criteria of fairness and reasonability, while "adequately informed deliberation" and the exclusion of "predictable forms of injustice" (Beitz, 1989, 66) may well be. Thus, when evaluating the fairness of the decision-making procedures we have to relate them to the general nature and purpose of the association in question. In this sense, there is no context-free political fairness.

However, I think that when we focus the context of decision-making *in the modern state*, and it's correlative notion, modern citizenship, we have stronger intuitions about the fairness of alternative procedures than the critics of procedural fairness are willing to admit. Estlund's notion of "procedural fairness", partly shared by Beitz and Peter, is extremely narrow. For him, the way a procedure handles its input does not fall under the notion, although it clearly is a part of identification conditions of the procedure: we cannot identify a procedure without describing how it connects its inputs with outcomes. This is an odd notion of procedural fairness. Consider how we apply the term "fairness" in other contexts, say, in competitions and contests of skill. Certainly, *one* defining element of a fair rule or a fair judgment in such cases is that it treats the competitors equally by taking equally account those and only those differences which are relevant from the point of the very competition. Thus, if the competition is on running, we should evaluate the speed and not, say the looks of the competitors. In a beauty contest, by contrast, the contestants' ability to run is irrelevant. In both cases, using a random mechanism would generally be considered as unfair for the very reason that a random mechanism does not connect inputs to outcomes in a systematic way. Thus, some kind of "responsiveness" condition is a part of the notion of fairness in these contexts, although it is, in Estlund's classification an "outcome-oriented" criterion. In another paradigmatic context of procedural fairness, trials, we expect a fair procedure to be responsive to evidence and to the arguments. Estlund would probably count all these examples as instances of *substantive* rather than *procedural* fairness. According to him, any appeal to "substantive" fairness is an outcome-oriented criterion. But criteria that deliver the prizes for the fastest runners, base the verdict on the evidence presented, or choose the candidate who received most votes, are not "outcome-oriented" in the sense that they would impose external standards (say, equal distribution of goods or utility maximization)

on the outcomes. Such responsiveness seems to be presupposed by the description of the respective procedures.

In some politically relevant cases "the institutional connection" between preferences and outcomes is such that we do not hesitate to call the rules *unfair*, even when there might be a "predictable and consistent relationship" required by Beitz between preferences and political results. Consider the bonus rules such as that used in Mussolini's Italy which gave two-thirds of all parliamentary seats to the plurality winner (Sect. 3.5.2). Rules of this type might establish a "predictable and consistent relationship" between voters' preferences and policy-making. And even a rule of this kind might "enable people to reach political decisions on the basis of adequate information", and "predictable forms of injustice" could be avoided, provided that the prevailing constitution were otherwise respected (Mussolini's government did not, of course, respect the constitution, but that is another matter). Nevertheless, most of us would probably reject Mussolini's rule as unfair in any democratic context.

5.3.3 Fairness and Uniqueness: Some Populist Responses

For a populist (as described by Riker), "the will of the people" or "the general will" is the central normative concept. The fundamental question is how this "will" should be identified in a given situation. What is the relationship between this will and actual voting results? One possibility is to equate them: the general or popular will is simply constituted by votes. "There is no 'will of the people' beyond an election result" (Benn & Peters, 1959, 336; cf. Kelsen, 1955, 2; Offe, 1996, 91). This might be called *criterial* populism. We have seen, however, that when the number of options is larger than two, there are numerous election rules and that "the will" revealed by an elections result may largely be an artifact created by the chosen rule. According to Riker's non-uniqueness argument (A), the kind of fairness required by democracy allows numerous non-equivalent decision-making methods.

Need a populist be committed to the uniqueness requirement? Couldn't he or she simply admit that there are several equally fair methods? Consider the analogy used by Coleman and Ferejohn:

> In American football, teams are awarded six points for a touchdown, three for a field goal, one for an extra point, and two for safety. The outcomes of football games depend on these assignments of points for events. A different assignment of points for events, or a different way of aggregating them, might well lead to different outcomes: some wins would become losses and vice versa. (...) Even though we could score football games differently—according to different rules—it does not follow that the outcomes of football games are ambiguous or that the score does not reveal what occurred in the game. Just showing that different outcomes result from applying different procedures, all of which are minimally fair or plausible on other grounds, is not enough to establish a troubling result for democracy. (Coleman & Ferejohn, 1986, 13)

In a similar vein, Pildes and Anderson say in their critique of social choice theories that "political communities might choose for many reasons to determine their collective will through one particular set of institutions and decision rules" (Pildes & Anderson, 1990, 2198; cf. 2189 fn. 172).

However, I do not think that Coleman and Ferejohn's sports analogy is a good one. In games and athletic contests, as in elections, the results are partly dependent on rules. These rules are sometimes a matter of dispute, and occasionally changed in order to make a game fairer. But, with all respect for football fans, it is not *terribly* important who wins a match. Voting rules, unlike the rules of football, are a central source of power in democratic societies. Therefore, they *are* important, at least sometimes.[13] Therefore it is also important to ask how they are chosen. The basic problem—which I called the Locke problem (Sect. 3.1.6)—is that voting rules are changed and maintained mainly by those who hold the power by the virtue of the very same rules. Therefore, Pildes and Anderson's comment also begs the question. If a "political community" is "free to choose its decision rule", how should it make *this* choice? If there are several, potentially conflicting reasons for and against different decision-making rules, how should the community arbitrate between them? Suppose that rules A, B, and C are all fair according to some criteria. Then, institutional manipulators may switch from A to B to C and back to A when it suits their purposes, and always justify the changes by appealing to fairness. If the popular will is really non-unique—so that outcomes produced by A, B, and C are all equally legitimate expressions of this will—there seems to be nothing obviously unethical in this form of manipulation. Moreover, while the solution provided by Coleman and Ferejohn may make the non-uniqueness problem appear somewhat less dramatic, it does not solve it. If the set of acceptable rules and outcomes is very large, the popular will is a too indeterminate notion to give any normative guidance. This would certainly be fatal for any recognizable form of democratic populism. As Gaus (1997, 153) says, if we are to make sense of the idea of giving the people what they want, or listening to their decision, it looks as though we had better accept the uniqueness requirement.

We have seen that the simple majority principle does not give an unambiguous criterion for the will of the people. Without some further criteria of fairness, this "will" cannot have any normative relevance. The most popular among the criteria has been the Condorcet-criterion as a natural extension of the majority principle (although, as we have seen, the Borda criterion also has many supporters while some are happy with the mere plurality; see Sects. 3.2.2, 3.3.2 and 3.3.3). However, *if* populists accept the Condorcet-criterion as the unique interpretation of the "will of the people", they still have to confront Riker's (C)-problem. In some cases there is no option that would satisfy the criterion. *Prima facie* the most plausible populist

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[13] Similarly Mueller (1991, 391) remarks that outcomes of elimination tournaments in chess, tennis and other sports may be path-dependent but nevertheless be regarded as fair. My answer to this argument is the same as above: the question does not have the same political relevance and, unlike politicians, the participants of contests do not have an unequally distributed control over the rules of the game.

answer to this problem is twofold. First, we should use only voting-methods which allow people to reveal the Condorcet winner. Second, we should identify the ambiguous (cyclical) cases, and then use some reasonable—unavoidably non-majoritarian—method to solve them. Admittedly, social choice theories have shown us that outcomes in cyclical cases are bound to be somewhat arbitrary or "unfair" in the sense that they do not result only from a fair aggregation of opinions. But if such cases are not very numerous, a Condorcetian version of populism seems to be a feasible option (Radcliff, 1992a; Tännsjö, 1992, 23; 2008, 70; Wade & Curry, 1970, 44–45). Curry and Wade formulate this position as follows:

> What democratic theory should properly require, then, is not that policy choices always be made democratically, because there are cases in which that is potentially impossible, but simply that *democratic criteria be used in the selection of public policy whenever possible.* A practical theory of democracy might require that meaningful consultation on important issues take place and that majorities should rule whenever possible, given some constraints in exceptional cases. (Wade & Curry, 1970, 44–45; my emphasis)

Torbjörn Tännsjö's small book, *Populist Democracy: A Defence* (1992; cf. also Tännsjö, 2008) is a detailed attempt to save the populist theory from Riker's attack on these lines. Tännsjö's treatise has several merits. Most importantly, he shows how a populist defense of majoritarian institutions can be freed from any form of collectivistic metaphysics. For Tännsjö, it is essential that a *causal* relation between the will of the people and the outcomes of the decision process exists. If the will of the people is that alternative *a* (rather than *b*) is to be adopted, the system is democratic if and only if *a* is adopted *because* it is the will of the people and if, contrary to fact, *b* would have been adopted if it had been the will of the people (Tännsjö, 1992, 16–17). It is not enough that political outcomes correspond to the popular opinion: the people should, in some sense, be the "authors" of the decisions. This distinguishes democracy as "the rule *by* the people" from "the rule *for* the people". In other words, Tännsjö correctly interprets voting as an exercise of power.

Tännsjö has a straightforward answer to the Rikerian problems: "the will of the people" is the alternative selected by the Condorcet criterion (Tännsjö, 1992, 28). Riker's non-uniqueness-problems (A) and (B) are solved by a single stroke. As Riker says, the non-uniqueness of voting methods would not constitute a problem for democratic theory *if* one method were clearly superior to all others (Riker, 1982, 41). This kind of solution to the non-uniqueness problem (A) is also endorsed by less enthusiastic "populists" like Ackerman (1980), McLean (1989) and Radcliff (1992a): they all accept the Condorcet criterion as *the* supreme principle. As we have seen, a Condorcet winner need not exist in every decision situation; this constitutes Riker's problem (C). If the will of the people is equated with the existence of a Condorcet winner, no will of the people need exist. This does not disturb Tännsjö. According to his view, such cases should be handled as if the alternatives were tied. In these cases, the will of the people limits the set of possible options only to some subset. Between these options, we may, as in the case of on ordinary tied vote, use some conventionally accepted method, such as giving the chairperson the power to make the decision or drawing a lot. For Tännsjö (2008, 70), as for Wade and Curry or for Radcliff (1992a), it is enough that whenever the

will of the people exists, it is implemented, and that the method used in cases where no such will exists determines the outcome *only* in those cases. However, Tännsjö's argument ignores a crucial difference between cycles and tied votes. Normally, voter groups have neither the power nor incentives to produce tied results intentionally.[14] But, as we have seen, they may well have reasons to try to create cycles by voting strategically.[15]

The problem of strategic voting (Riker's problem (D)) finds an equally straightforward solution in Tännsjö's work. According to him,

> the things that matter to (narrow) democratic theory are only explicitly—publicly—stated preferences. If everyone misrepresents his true preferences, what matters to (narrow) democratic theory are his publicly presented—misrepresented—preferences, not his—hidden—true preferences. His true preferences may be relevant to the decision of an enlightened despot; they have nothing whatsoever to do with (narrow) democratic theory. (Tännsjö, 1992, 29–30)

Riker's view was that all outcomes resulting from strategic voting were ethically meaningless (step (4) in argument (D)). Because we cannot know which outcomes result from strategic voting, all voting outcomes are to be treated as meaningless. Tännsjö's answer is, in effect, to reject Riker's premise (4). If only "publicly stated preferences" matter, counterfactual comparisons between the 'true will' and the 'manipulated will' of the people presupposed in Riker's argument (D) is irrelevant. This is criterial populism. As we have seen, however, Tännsjö does not define "the will of the people" simply in terms of publicly stated preferences. For him, the true will of the people is identified with the Condorcet winner. If the voting rule does not guarantee the election of a Condorcet winner, we can meaningfully ask whether an alternative selected by a procedure actually is in accordance with the will of the people or not. For example, if the rule used is the plurality runoff between three candidates and candidate *a* is eliminated in the first ballot because she received fewer votes than candidates *b* and *c* (for some real-life examples, see Sect. 3.2.3), we may meaningfully ask whether a majority might have preferred the eliminated candidate to the final winner. *This already forces us to go beyond "publicly stated preferences"*. Tännsjö has to admit the relevance of counterfactual comparisons in such cases. Thus, in Tännsjö's account it is relevant to ask how a procedure influenced the outcome, but not whether people themselves anticipated this influence. If the supporters of candidate *a* saw the case as hopeless from the start and

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[14] Neutral supermajority rules are an exception. When they are used, tied results may be easily produced. Consequently, the choice of the tie-breaking method may become politically important.

[15] There is a further ambiguity in Tännsjö's defense of majoritarianism. Unlike Riker, he selects one possible normative requirement as the fundamental one; unlike many traditional populists, he does not see the majority rule as required by equality or autonomy, only as compatible with them. However, he is also willing to consider unanimity rule as an acceptable alternative to majority rule (Tännsjö, 1992, Chapter 4), although it does not satisfy the Condorcet criterion. If *both* majority and unanimity rules may be compatible with Tännsjö's version of populism, what could be wrong with rules that are in some sense "between" them, such as the qualified majorities or strong bicameralism recommended by Riker?.

voted strategically for *b* in the first ballot—thus making *b* an absolute winner—we cannot meaningfully raise the question about the correctness of the result.

Tännsjö (1992, 30) suggests that the possibility to vote against one's 'true' preferences is necessary for democratic compromises. I think that he is on the right track in this. One reason why strategic voting cannot always be considered a vice is that compromises are impossible without some forms of it. Because compromises are sometimes ethically acceptable, we cannot say that *all* outcomes resulting from strategic voting are ethically meaningless. But Tännsjö's doctrine of "publicly expressed preferences" is still not satisfactory. We see this when we consider Riker's last problem (E), which Tännsjö does not really tackle. According to Riker's argument (E), if an outcome results from agenda manipulation, it is ethically meaningless. The counterfactual proposition needed in this argument is stronger than the corresponding counterfactual proposition used in the argument based on the possibility strategic voting (D). When discussing strategic voting, we ask what are the 'true' preferences of voters over a *given* set of options, in other words, how would the voters vote if they were voting according to their true preferences. When discussing (certain forms of) agenda manipulation, we ask what their true preferences would be over a different, non-actual set of alternatives. Tännsjö's doctrine of "publicly expressed preferences" rules *both* counterfactual questions out as irrelevant to democratic theory. Generally, the theories of social choice operate with preferences, not just with *expressed* preferences (votes). Actual voting rules, however, can deal only with expressed preferences. The proper rationale of going beyond expressed preferences is this: institutions both connect the votes to outcomes and shape the agenda. Voters' expressed preferences are influenced and constrained by these factors. Hence it is legitimate to focus the relationship between voters' true preferences and outcomes, not just the relationship between expressed preferences (votes) and outcomes. People may express 'untrue' preferences for various reasons—among them are coercion, intimidation, bribery, confusion, and the lack of genuine alternatives. If actual voting results are taken as authoritative expressions of the will of the people, at least these possibilities should be ruled out. "Publicly expressed preferences" can be authoritative only if the whole process in which they are formed, expressed and counted is at least minimally fair. But this fairness or lack of it can be detected only by making counterfactual comparisons.

The following extreme example (Walker, 2003) shows how counterfactual considerations, although problematic, must be taken seriously. In a referendum arranged in Chile in 1978, the majority of voters answered affirmatively to the question of whether "in the face of international aggression unleashed against the government of the fatherland" they "support President Pinochet in his defence of the dignity of Chile" as well as "reaffirm the legitimate right of the republic to conduct the process of institutionalization in a manner befitting its sovereignty". Because there were only two alternatives in the Chilean referendum ("yes" or "no"), the winning alternative was, in this set of options, inevitably a Condorcet winner. Supposing that there was no coercion or intimidation of voters (a doubtful supposition!) the publicly expressed will of the people of Chile in 1978 was that

General Pinochet was allowed to continue his dictatorship. But no one can deny that the agenda of the referendum was manipulated! From the democratic point of view, it is meaningful and relevant to ask the counterfactual question: how the Chileans *would* have answered to a less loaded question? In extreme cases like this, we have to admit that the ethically meaningful "will of the people" cannot be equated with the publicly expressed will of a majority. We may well conclude that agenda manipulation made the referendum result ethically meaningless even if people were free to vote both for or against the proposition, and even if their publicly expressed preferences *within this particular set of options* did actually determine the outcome so that the required causal relationship existed.

It is not clear how Tännsjö would accommodate such cases. In his theory of causal will, a necessary condition for democracy is that the people have the power to determine the outcome, but he does not say how the set of alternatives is determined. What he does say is that "the relevant set of alternatives is the set picked out by the will of the people" (p. 16)—but because the will of the people is, for him, simply the Condorcet-winning choice counted from the publicly expressed preferences, people should be able to take vote on the agenda, too. Later he notes that this may, in principle, lead to infinite regress. "In practice", however, this regress always comes to an end (p. 20). Here, the phrase "in practice" is ambiguous. If Tännsjö means that in practice someone has a final say over the formulation of alternatives, he is right. In Chile, for example, this 'someone' was General Pinochet. If Tännsjö means, instead, that in an *ideal* agenda formation process people would reach an agreement on the relevant formulation of proposals, he may or may not be right. But if he means the latter, he has to go quite far beyond the "publicly expressed preferences". It is not enough to say that an ideal democratic process is one which respects such procedural criteria of vote aggregation as the Condorcet criterion, for the 1978 referendum in Chile *did* respect that criterion. Tännsjö also needs a notion of an ideal or fair process of democratic agenda formation. These problems support the intuition that the *real* challenge to all democratic theories is not the classical problem of cyclical majorities (C); rather, it is the problem of manipulation, as formulated in arguments (D) and (E). However, the problems are interconnected.

5.4 Riker's Thesis: Some Institutional Implications

5.4.1 Riker on Liberal Institutions

If the problems uncovered by the social choice theorists are as dramatic and inevitable as Riker claims, why are we not witnessing an endless cycling in real-life politics?[16] In the earlier chapters we saw that most voting rules in actual use are

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[16] The discussion on this issue was initiated by Gordon Tullock's well-known article 'Why so much stability?' in *Public Choice* (Tullock, 1981).

able to hide the problem because they are not based on the full set of pairwise comparisons. However, if Riker is right, the cycle should become visible in the long run. As we have seen, his arguments presuppose that cycles and manipulation do occur in the real world, and can at least sometimes be detected, in spite of the institutions. Partly this is a matter of interpreting facts. Riker's scheme, as presented in his book, is not a deductively-organized body of testable hypotheses. Rather, it is a general framework of interpretation. According to it, political changes should not be explained mainly in terms of the changes of opinion among the electorate, nor in terms of economic and social forces underlying those changes, but in terms of the interaction of political institutions and the strategic choices of political actors.

For most Arrow's commentators before Riker—for example, for Dahl (in 1956), Runciman, Wolff, Rowley, Goodwin, Taylor, and Levine—argument (C) was the crucial one. The possibility of majority cycles was supposed to show why "democracy is impossible". Somewhat more moderately, Riker states that "the only effective way to guarantee consistency in social outcomes is to require *some kind* of concentration of power in a society" (Riker, 1982, 132; my emphasis). According to Riker and his followers, the absence of visible cyclical movement in politics should be explained in terms of institutions. Following Kenneth Shepsle, we can say that under suitable institutional arrangements, a *structure-induced* equilibrium is likely to prevail (See Shepsle & Weingast, 1981, 1987). By "equilibrium" we mean such a combination of choices from which no voter has either the power or a reason to deviate unless others also deviate from it. If equilibrium is structure-induced, such a situation is produced by the institutions, by the rules of the game. Although voters' opinions are not in equilibrium in the sense that they alone would pick a unique alternative, the interplay of agenda-controlling institutions, voting rules, and voters' preferences produces stable outcomes.

To put it simply, there are three institutional methods to prevent cycles or, at least to diminish their importance. First, although institutions cannot prevent cycles in the sense that they could force people to adopt non-cyclical preferences, they may prevent cycling by making it more difficult to change the prevailing *status quo*. More technically, although there is no institutional way to ensure that a Condorcet-winner (an alternative that can beat all other alternatives in a series of pairwise majority votes) always exists, institutions can ensure that there is a *core*, that is, an alternative or set of alternatives that cannot be defeated by any alternative outside that set. This can be achieved either by using qualified majority requirements or by dividing the decision-making group into two or more sub-groups and requiring an agreement between them (majority-majority or majority-unanimity). The second method is based on the fact that the more there are alternatives the greater the *a priori* probability of a preference cycle. Consequently, *all* institutional arrangements which restrict the number of alternatives on the agenda do, *ceteris paribus*, diminish the likelihood of cycles. Third, cycles are less likely to become visible if some comparisons between the alternatives on the agenda are left unmade. For example, many methods of decision-making are based on successive elimination of alternatives or candidates.

Riker (1992, 102) lists several "liberal" institutions which make the cyclical movement less likely. He mentions (1) bicameral legislatures, (2) the requirement of legislative supermajorities, (3) the separate election of executives, (4) multi-party proportional representation which usually prevents single-party majorities and (5) judicial veto on legislation. Strong bicameralism, where two separately elected chambers have to approve decisions, is Riker's favoured method. By making ordinary legislative changes more difficult, it may also work as an anti-cyclical device (Riker, 1992). The logic of the argument may be illustrated by a simple example. Consider the standard case of the Condorcet cycle in a unicameral legislature:

Example 5.1

20 voters	20 voters	20 voters
a	b	c
b	c	d
c	d	a
d	a	b

No option is stable: a majority prefers d to a, a to c, b to c and c to d. How should democratic decision making proceed in such a case? Suppose that we divide the assembly into two groups ("Chamber A" and "Chamber B"). The members are grouped in the following way:

Chamber A		Chamber B	
10	20	10	20
b	a	b	c
c	b	c	d
d	c	d	a
a	d	a	b

Under this arrangement, a proposal has to get a majority in *both* chambers in order to be accepted. a can still beat b (in a pairwise voting, a majority supports a against b in both chambers) and c can beat d (by a unanimous vote in both chambers). Both a and c are now "stable" outcomes in the sense that they cannot be overturned by any coalition. This stability is due to the fact that the two chambers have *different* compositions. If all the three preference orderings were equally represented in both chambers, bicameralism would not prevent cycling. Thus, Riker is able to give a new answer to an old "populist" dilemma: how to justify bicameralism in a democratic system? The strong populist claim is that a unique will of the people exists for every issue. What then could be the justification of two assemblies representing the same people? During the French Revolution, Mathieu de Montmorency expressed the problem (sometimes called "Sieyès's problem") as follows:

> If the two chambers have the like composition, one of them becomes useless because it can no longer be anything other than a body necessarily always influenced by the other. If the composition is not the same and the idea of a senate is adopted, it will establish aristocracy and will lead into the subjection of the people. (Cited after Finer, 1962, 403)

Many democratic theorists have seen in upper chambers a necessarily undemocratic element. Kelsen (1945, 298) rephrases the argument: "If the one [chamber] is perfectly democratic, the other must be somewhat lacking in democratic character". Both the abolition of qualified majorities and the movement towards unicameralism have generally been seen as a part of the general democratization process.[17] However, if Riker and his followers are right, there is neither a unique popular will, nor a unique democratic way to choose representatives. From Riker's non-uniqueness arguments (A) and (B) it follows that two representative assemblies may be elected in different ways, they may have a different composition and they may produce different results in their deliberations; yet both of them can be *equally* "democratic" and "representative". Thus, Sieyès's problem evaporates. Bicameralism seems to be a democratic way of increasing stability, for the will of the majority is constrained only by the will of another majority.

Supermajority rules prevent the selection of non-Condorcet winning options by raising the threshold of change. Hence, they may equally prevent the adoption of Condorcet-winning alternatives. The effect of bicameralism is somewhat more subtle. A bicameral system is less likely to reject an alternative supported by majorities of *citizens* than a unicameral system operating with a qualified-majority requirement. In a sense, a bicameral system is like a rule which requires qualified majorities of a variable size. The argument for strong bicameralism may be related to the majoritarian argument for supermajority rules mentioned in Sect. 2.2.3. In a two-stage majority process, roughly 25 % of the electors (one-half of the voters in one-half of the electoral districts) are, in theory, able to choose a majority of legislators to a unicameral body and thereby impose their will in legislation. If there are two houses, if every decision requires the assent of majorities in both, and if the houses are elected from diversely arranged districts, a greater number of electors is needed to control legislation. However, bicameralism also means that about 25 % of the electors can *block* any measure. As Bentham (1791/1999) observed in his *Political Tactics*: "The division of the legislative body (…) will often have the effect of giving to the minority the effect of the majority. The unanimity even of one of the two assemblies would be defeated by a majority of a single vote in the other assembly."[18] If the justification of bicameralism were simply to prevent electoral minorities from sweeping legislatures, a proportional representation system would do the same job. Moreover, Tsebelis (1995) has shown that the social-choice argument for bicameralism has its limits. It cannot be generalized to situations in which there are more than two political dimensions. If the issues are multidimensional, the existence of a core is almost as unlikely in a bicameral as in a unicameral system.

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[17] During the twentieth century, many non-federal countries either weakened their higher chambers (for example, the U.K. and France), made the two chambers more congruent, or abolished the higher chambers altogether (New Zealand, Denmark, Sweden).

[18] J. S. Mill replied that although such a situation was theoretically possible, in practice it was unlikely. See Mill (1861/1972), 324–325.

In an article written jointly with Barry R. Weingast (Riker & Weingast, 1988), Riker applies his anti-populist thesis to one specific and much-discussed element of liberal constitutionalism, namely to the courts' right to invalidate laws enacted by legislative majorities. Again, he interprets this element of the traditional liberal theory as a means of partly overcoming the problems unveiled by the theory of social choice. This principle has been under a continuous attack by "populists". The "counter-majoritarian difficulty" created by strong constitutional review is well expressed by John Hart Ely:

> When a court invalidates an act of the political branches on constitutional grounds, however, it is overruling [the legislature's] judgement, and normally doing so in a way that is not subject to "correction" by the ordinary lawmaking process. Thus, the central function, and it is at the same time the central problem, of judicial review: a body that is not elected or otherwise politically responsible is telling the people's elected representatives that they cannot govern as they'd like. (Ely, 1980, 4–5)

One standard argument for the compatibility of majoritarian democracy and judicial review is that the constitution, of which the court is protecting, is itself accepted by a majority of representatives. The conflict exists, then, between the earlier and the later will of majorities, or between majority acting as a *pouvoir constituante* and as a *pouvoir constituée*, and not just between a majority and the court. Viewed in this way, the counter-majoritarian difficulty begins to resemble the problem of bicameralism: can the people be said to have two contradictory wills, and if it can, which one of the contradicting wills should prevail? Liberal constitutionalists think that the earlier and more permanent (constitution-enacting) will should prevail over the later will of temporary majority coalitions; populists take the opposite position. Both may, in principle, justify their position by an appeal to the "will of the people".

Although bicameralism and qualified majority requirements can be seen as partly performing a role similar to that of courts with a power of constitutional review—they all can be seen as instruments protecting the existing order and preventing ill-considered changes—there is a difference. For bicameralism and qualified majority-rules rise the thresholds of change "only" by increasing the required *size* of decisive coalitions. The institution of judicial review—when combined with strong constitutional limitations—effectively constraints the process itself by imposing certain outcomes even against the expressed will of majorities. However, if the invalidating power of courts is mainly used for protecting the democratic process itself against occasional anti-democratic acts of a majority, it seems to be fully compatible with the moderate versions of populism. Indeed, some theorists, such as Ely (1980) or Nino (1996), would like to reserve the use of constitutional review mainly for this purpose.

We can distinguish between (at least) three competing traditional arguments for judicial review: the practice is (contingently) justified by the will of the majority as expressed in the Constitution; it follows from the internal logic of majoritarian democracy, or it is based on some independent and supreme principle, such as pre-existing natural rights. None of these well-trodden roads seems to be open for Riker. He is skeptical about the legitimating role of the notion of popular will;

therefore, the argument that a Constitution itself is a product of that will cannot play any specific role in the justification. Nor does he appeal to natural rights. Nevertheless, he cannot accept the idea that rights related to the democratic process itself should enjoy a specific status. In their article, Riker and Weingast claim that the US-American courts have adopted a double standard: the courts are willing to protect political and civil rights against legislators, while in economic issues, they think that "the people should resort to the polls, not to the courts" (The Court in *Munn vs. Illinois*, quoted after Riker & Weingast, 1988, 377). Their aim is to criticize this practice. Hence, they cannot see rights mainly as preconditions for democratic process, for this interpretation would give only a very weak protection for *economic* rights.

Bicameralism, qualified majority rules, federalism, constitutional review, and executive veto can be seen as constraints on the operation of majority rule. In a sense, all these "anti-cyclical" devices are veto systems. If a veto system is decisive, it has to violate the (weak) neutrality requirement by favouring the *status quo*. We see that these different veto-systems have different consequences. Qualified-majority rules and bicameralism necessarily create privileged minorities—minorities that have a blocking power because they either constitute a blocking minority, or a majority in one chamber. To the extent that the partition of a bicameral legislature is arbitrary, the outcomes themselves reflect this arbitrariness. If, for example, small member-states are overrepresented in a federal chamber, decision-making is biased for the electors of those states. In other words, bicameral systems—like all "double majority" systems—are not *anonymous*. In this sense, qualified majority rules appear as less arbitrary, for, being non-neutral but anonymous, they favour *all* conservative minorities. However, bicameralism has one advantage over various agenda restriction mechanisms. Because the composition of the chambers in a bicameral legislature is determined by law (partly by a constitution), they are less subject to conscious manipulation than agenda restrictions. We can summarize the effects of the alternative anti-cyclical arrangements:

1. *Qualified majority* rules violate neutrality (and hence Arrow's independence condition) by giving more blocking power to *all* conservative minorities.
2. *Bicameralism* violates neutrality *and* anonymity by giving more blocking power to *some* conservative minorities—namely, to the minorities favoured by electoral arrangements.
3. *Agenda restrictions* violate anonymity by giving more active power as well as blocking power to those who control the agenda. They violate the domain condition when they exclude some alternatives from consideration.
4. *Judicial review* violates non-imposition by removing some central decisions from the jurisdiction of legislatures.

This list concretizes Riker's argument against populism described above. Although there is no necessary choice between "dictatorship and democracy", Riker claims that stability can be bought only at the cost of the violation of some *prima facie* valid democratic principles. These violations need not involve a dictatorship or even a significant "concentration of power"; nevertheless, *at least*

some outcomes are necessarily determined by something other than fair and equal counting of votes. According to Riker, however, this is a problem only if democracy is interpreted in the populist way, as faithful implementation of the unique popular will which can be found only through majoritarian voting. Riker's liberal interpretation of democracy is supposed to survive from the critique inspired by the social choice theories.

5.4.2 The Meaninglessness-Thesis and the Role of Courts

Riker's argument for constitutional review is a good example of the non-traditional nature of his liberalism. In an article written jointly with Barry R. Weingast (1988), Riker presents an argument for a strong version of constitutional review. Their argument has two branches. First, according to the populist critics, courts are expected to defer to legislatures, because legislative decisions are made by majorities, and decisions made by majorities enjoy greater legitimacy than those made by unelected and unaccountable judges. Against this traditional populist argument, Riker and Weingast present the social choice problems (C)–(E), trying to show that democratic decisions are often *not* made by majorities. Second, one aspect of this deference is that when the "plain text" of statutes is unclear, courts are supposed to try to find out what the legislature *really* means when enacting the problematic statutes. Against this, Riker and Weingast claim that the notion of "legislative intent" is meaningless, again because of the problems revealed by the theory of social choice. These arguments deserve an extensive discussion; mainly because so many American lawyers and legal theorists have found them persuasive (see Chemerinsky, 1989; Easterbrook, 1982, 1983; Mashaw, 1989; Salzburger, 1993; Tribe, 1988). Indeed, of all Riker's normative recommendations, the argument for the independence of courts seems to have found the widest audience.

The traditional liberal justification of the power of courts is that majorities simply do not have the right to do what they want—not even when unambiguous majorities do exist. Hence, the *prima facie* legitimacy of majoritarian decisions is always a limited one. As compared with this traditional justification, Riker and Weingast's argument derived from social choice justifies either too much or too little. If the message is that majority decisions have no specific legitimacy whatsoever, it certainly justifies too much. Consider, for example, the position of the Supreme Court of the United States. Arguably, it is the most powerful court in the world. From where does it derive its power? From a constitution which is supposed to be legitimate because it was once ratified by "we, the people", and which is continuously accepted, or at least tolerated, by the great majority of the Americans. The Constitution, in turn, is accepted partly because it is believed to establish a democratic form of government. One of the tasks of the Court is to protect that form of government. The judges themselves, although not democratically accountable, are nominated by a democratically elected President. These nominations are ratified by a democratically elected Senate. Thus, the legitimacy of the Court itself stands

and falls with the legitimacy of democracy. If, following Riker and Weingast's advice, judges treated "all legislative outcomes as possibly the result of arbitrary processes" (p. 400), why should the Constitution itself, or the Supreme Court nominations, be exempted? (Farber & Frickey, 1991, 55).

However, if majority decisions *do* nevertheless enjoy a *prima facie* legitimacy, and only those decisions not backed by clear and unambiguous majorities are of doubtful value, the "counter-majoritarian difficulty" is still there. The traditional idea of judicial review is not that the constitutionality of legislative decisions depends on the nature of the majorities made the decisions. Decisions are supposed to be ruled as constitutional or unconstitutional because of their *content*, not—or at least, not exclusively—because of some properties of the decision making process. Even a clear and unambiguous majority decision may violate the basic rights. What is disturbing in Riker and Weingast's argument is that, like the earlier arguments of Wolff, Rowley, and others (Sects. 5.1.1–5.1.3), it is actually an argument against democracy in general, not against a particular interpretation of it. Riker and Weingast's point is that because majoritarian decisions do not enjoy their supposed legitimacy, the final decisions could as well or more legitimately be made by somebody else. We have already seen that "majorities do not really govern" in the sense that outcomes resulting from a majoritarian process are not necessarily Condorcet winners. Does it follow that courts become *for this specific reason* more legitimate decision-makers? If decisions made by majorities nevertheless enjoy a *prima facie* legitimacy, courts should at least defer to those decisions that are made by unambiguous majorities. Only when an outcome selected by a majoritarian process is *not* a Condorcet winner—when, for example, there is a cycle—the outcome has no more *prima facie* legitimacy than an alternative selected by a court. But still, it does not have less of it either. From a majoritarian point of view, both a decision made by (say) mere plurality, and a decision made by (a majority in) an unelected court are arbitrary. In either case, there is no unambiguous popular majority behind the decision. Unless there is some specific reason to suppose that courts would be better equipped than legislatures to pick the real Condorcet winners, we cannot appeal to the (C) problem. Probably the US presidential election did not pick the Condorcet winning candidate in the elections of 2000. Should *this* fact—and not the text of the Constitution—provide a reason for the US Supreme Court to order the officials in Florida to re-count the votes? Even if majoritarian processes are troubled by the social choice problems, those problems are not part of the accepted reasons for judicial action. Thus, when defending his case, the losing candidate, Al Gore did not argue that he was the real winner, but only that there were irregularities in the vote counting process in Florida.

As theorists from Pufendorf via Heckscher to Pettit and List have noticed, there is an additional complication. Courts, for example, the US Supreme Court, are also collective decision makers. When judges disagree, multi-member courts have to resort to some collective decision-making procedure, in other words, to the majority or plurality rule. One may claim that courts are equally (or even more) vulnerable to the paradoxes of social choice. If, as Riker, Weingast and their followers argue, the people or legislatures cannot have a coherent will, it is not clear how a multi-

member court could have one. If all majority decisions should be treated as meaningless, the rulings of courts should be treated as equally meaningless. To quote Ferejohn: "While the notion of the Court, as a multi-member body, acting as an intentional agent, may be familiar, it is no less mysterious (. . .) than the idea of a legislature acting in that way." (Ferejohn, 2007, 122, fn. 4).

The more specific claim against the use of legislative intent in interpretation is no more convincing than the general claim against the legitimacy of all majority decisions. In the writings of Riker and his followers, three separate arguments against the intelligibility of legislative intent are put forth. First, Riker and Weingast (1988, 380), Shepsle (1992, 239), Munger (2009, 540) *etc*. argue that ascribing intentions to collectives like legislatures is simply a category mistake, for only individuals have intentions. In this they follow a well-trodden track. In his article 'Legislative Intent' (1968) MacCallum reviewed some earlier arguments for the skeptical claim. Already in the 1930s Albert Kocourek stated that "legislation is a group activity and it is impossible to conceive a group mind or cerebration" while D.J. Payne considered it self-evident that "the legislature, being a composite body, cannot have a single state of mind and so cannot have single intention" (quoted from MacCallum, 1968, 248). However, if this is a *conceptual* truth, we do not need anything like Arrow's theorem in order to show it.

Second, Riker and his followers point out that voters may support a proposal for different, even conflicting reasons. Thus, even if collective intentions as *shared* intentions are possible, the legislators need not share any single intention or purpose that would be described as *the* intent behind a particular piece of legislation (Shepsle, 1992, 244). At least sometimes it is certainly true. But, again, this truth seems to be entirely independent of any particular social choice results. It could be true even when decision makers were unanimous. And sometimes it certainly is not true: people may well share a purpose or intention when acting together.

Third, Riker *et al*. focus on cases in which the common will clearly seems to be ambiguous (or non-existent): the cyclical cases. Here, at last, the social choice results seem to make an impact to the argument. If, in a majoritarian decision situation, there are several alternatives, all supported by some majority, isn't it obvious that there is no "legislative intent"? Consider a trivial case, the election of an official. Suppose that a committee elects a chair for itself. In the preferences of the committee members, Jones, Ms. Smith, and Mr. Smith are in a majority cycle. For some procedural reason, Ms. Smith is elected (perhaps she was the plurality winner). Suppose that the minutes of the committee meeting just say: "Smith was elected". While the "common will" of the committee is "ambiguous" in the sense that under different rules it might have chosen Jones rather than Ms. Smith, there is still a clear and unambiguous answer to the question of whether the "committee intended" to elect Ms. Smith rather than her namesake Mr. Smith. The minutes of the committee may fail to distinguish between the two Smiths, but if the issue is raised in a court, it may check the identity of the relevant Smith by consulting the intentions of the members. Even if there was a cycle, the reasons behind every proposal involved in a cycle (choosing Jones, Mr. Smith or Ms. Smith) may themselves be unambiguous, and if the textual meaning of the decision is nevertheless an

ambiguous one, these background reasons may be consulted. If, for example, the minutes also indicate that the intention of the winning plurality was to elect the only female member of the committee as the chair, we may be sure that the original intent behind the decision was to elect Ms. rather than Mr. Smith. There was a cycle of intended outcomes, but, *given the rules of the game*, the victorious intention was nevertheless unambiguous and could be found out. Similarly, the intent behind a bill approved by a Parliament may, for a lawyer's purposes, be clear and understandable even when several proposals—*and* the intents behind them—form a cycle.

To conclude: "legislative intent" as an interpretive criterion may be seen as problematic for the first and second reasons stated by Riker and Weingast, or for some completely different reasons. But *the social choice problems do not add anything essential to them*. The most we can say for Riker and Weingast's arguments is this: If the democratic systems really worked in a completely chaotic way, this would certainly cause problems for those whose task is to interpret the resulting decisions. And *no* method of interpretation, be it intent-bound, based on the "plain text" approach, or on something else, would be likely to ease their troubles. *Any* legislative material they had to work with would exhibit the chaotic nature of the decision-making processes. The social choice argument for extensive constitutional review shares the problem we noticed in the arguments of Wolff, Rowley, Goodwin, Taylor *et al*. The fact that majoritarian methods do not satisfy Arrow's conditions can constitute an independent argument for using some non-majoritarian methods (free markets, unanimity, the power of a Utopian *avant-garde*, or constitutional review) but only if these alternative methods fare better in *Arrow's* terms. Alternative methods may, of course, have some additional desirable properties that are independent of the Arrovian considerations. But majoritarian methods may also have such properties. Then, the comparison between the methods should focus these issues. As such, Arrow's Theorem and its logical relatives contribute nothing new to the old discussion on the role of courts and of the proper limits of judicial review (Mashaw, 1997, Chapter 4).

5.4.3   Stability and the "Liberal" Bias for Status Quo

One important theme in Riker and in the post-Rikerian scholarship is stability; according to Dowding (2006, 327), Riker was "fascinated" by it. Although "stability" is a positive word, it is not reasonable to see stability as an independent virtue of institutions. Most of us hope that bad regimes were less stable. But, admittedly, stability is an important derivative virtue of good regimes. A political system cannot be a good or just if it is in essence unstable.

However, by "stability" we may mean different things. The stability of individual *decisions* is directly related to Riker's arguments (C)–(E). When cycles are manifest or when they can be created by strategic voting or agenda-manipulation, decisions are not stable, for the losers have always a motivation to reopen issues in

the hope of getting more favorable decisions. This need not be considered only as a theoretic possibility. Although critics like Tullock (1981) are right in that legislative decisions, for example, are not continuously made and unmade, the *cabinet instability* in some multi-party systems (for example, in the Weimar Republic, the Fourth French Republic, Italy, Israel, and Finland up to the 1980s) seems to exhibit such a cyclical movement. Interestingly, this type of instability is related to one of the main arguments of the supporters of the plurality rule against proportional representation. PR is likely to create a multi-party system and to increase "instability" in this sense. The plurality rule is often defended because of its stability-maintaining properties rather than because of its fairness. However, the stability of individual decisions (including coalition agreements) should be distinguished from the stability of *long-term policies*. While in some multi-party systems cabinet coalitions seem to be in an eternal cyclical movement, in the long run the policies adopted in those systems may nevertheless be relatively stable. Sudden and radical switches for example from the Right to the Left are unusual (Sect. 3.5.9). Finally, *institutional* or *systemic* stability should be distinguished from both the stability of decisions and the stability of policies. A system is stable when its basic constitution (which should *not* be equated with a constitutional document) is neither a subject of frequent radical changes nor under a continual threat. To continue the example, some supporters of the plurality rule argue that in the long run, the PR-systems tend to be unstable even in the systemic sense—the Weimar Republic and the Fourth Republic are often mentioned as prime examples (Blais & Dion, 1990).

We have, then, several notions of "stability". Although the differences between these various notions are not razor-sharp, it is wrong to ignore the conceptual differences. When speaking about "stability", the theorists of social choice usually refer to the first type of stability, to the stability of decisions.[19] However, it is by no means self-evident that this form of "stability" should be our main concern. On the one hand, a *system* may be stable even if there are occasional majority cycles when decisions are made on minor issues, especially if the policies involved in the cycles are close to each other. On the other hand, a system may be unstable even when individual decisions are not continuously made and unmade. The forms of "stability" discussed in social choice theories may, as such, have very little to do with the "stability" that interests citizens, practical politicians, or more empirically oriented social scientists.

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[19] Grofman and Uhlaner (1985) prefer a more fine-grained classification. They identify six types of stability: (1) *Global preference stability*: there exists a Condorcet winner in the feasible set of alternatives. (2) *Choice set stability*: a Condorcet winner exists among the alternatives actually voted upon. (3) *Riker-move stability*: there exists no new dimension such that the social choice would be altered by including it in the decision-making process. (4) *Stochastic predictability*: the expected outcomes are predictable, e.g. confined to a certain limited domain. (5) *Outcome stability*: the outcomes produced by a decision-making mechanism are accepted as legitimate. (6) *System stability*: there is a general willingness to accept the basic "rules of the game". They remark that these types of stability are logically distinct. My notion of the "stability of decisions" lumps (1), (2) and (3) together, while (4) and (5) are both related to the "stability of policies".

Riker claims that the existence of an anti-majoritarian constitution is a sufficient or at least a necessary condition for the stability of liberal-democratic regimes. The argument is simply that anti-majoritarian institutions (bicameralism, judicial review etc.) make simple majority cycles less likely. However, if "stability" is here read either as "stability of policies" or as "systemic stability", it is not clear that there is any empirical connection between these forms of stability and anti-majoritarian ("liberal") institutions. To take an example, the UK has, in any inter-national comparison, a good liberal record, and has experienced no revolutions since 1688. Nevertheless, it has no written constitution at all, and a majority in the Lower House of the Parliament is legally omnipotent. A majority-constraining constitution has not been a necessary condition for stability. By contrast, most Latin American countries have adopted their basic political institutions from the USA; the executive veto, bicameralism, constitutional review and federalism are often included in their constitutions. Their history, however, has not been very liberal or very stable. As in the United States, in most Latin American countries there are independent, popularly elected presidents who can initiate legislation and have a veto over parliamentary initiatives, but who can neither dissolve parliaments nor be dismissed by them. As in the United States, Latin American presidents often do not have a majority support in their Parliaments. Because both branches of the government can block each other's activities, the result is often a deadlock. Nothing gets done. From the Rikerian point of view, this may look like an ideal situation: the *status quo* is protected from the arbitrary decisions of temporary majorities. How-ever, the liberal principle of dispersed constitutional veto powers seems to contri-bute to the *systemic* instability apparent in many Latin American countries.[20] Here, the difference between the stability of outcomes and systemic stability is, again, useful. If a parliament and a president are able to exercise a veto over each other's decisions, and if they often have opposite preferences, the outcomes tend to be stable in the sense that the *status quo* prevails. But this does not tell anything about the stability of the system. The latter is largely dependent on what happens outside the parliamentary sessions. The *status quo* thus protected may be a really bad one, and its "stability" increases the temptation to resort to extra-constitutional measures (Mainwaring, 1993).[21]

From the democratic point of view, the fundamental normative problem with anti-majoritarian devices recommended by Riker is that, due to their non-neutral character, they do not treat all participants of a democratic process in an equal way. The supposedly arbitrary nature of majoritarian methods is replaced by an in-built bias for conservative minorities. Riker's more recent contributions (Riker, 1992, 1993) make the problem obvious. After discussing the traditional problem of

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[20] Indeed, Sartori (1997, 87) argues that "the more we have a divided power structure the more we need—it would seem—a 'united government', i.e. a same majority in control of the executive and of the Congress". According to him, the US political system works *in spite of* its constitution, not because of it.

[21] This point is well argued in an article written by McGann (2004).

majority tyranny, Riker argues that "there is even a worse kind of majority tyranny", namely "the tyranny of one majority over another" when the preferences form a majority cycle (Riker, 1992, 104–105). The non-tyrannical way to solve cyclical cases is to select the *status quo* (110–113). This new notion of "majority tyranny" has, however, very little to do with the traditional problem that a majority may violate the fundamental rights of a minority or ignore its vital interests. Consider one of the very few well established real-life examples of preference cycles, discussed in Sect. 3.2.6. If there really was no unique majority when the Norwegian *Storting* decided on the location of the new airport, the democracy legitimacy of that particular decision may be in doubt. Yet, it can hardly be described as an instance of "tyranny".

In *Liberalism against Populism* Riker's point was that *no* deep moral meaning could be attached to the aggregated voting results. We cannot say that the right thing to do is always to respect the will of the majority, for there is no unambiguous way to construct the will. But from this, it does not follow that the only right thing to do is to select the *status quo*. According to Riker's original (1982) theory, a *status quo* solution has to be as much or as little "tyrannical" as any other solution when it is included in a top cycle. As he said, "When institutional stability is imposed on what would otherwise be a disequilibrium of tastes, the imposed equilibrium is necessarily unfair". If the *status quo* alternative is *not* in the top cycle, there is some reason to describe a decision which nevertheless selects this alternative as "tyrannical". Even a method that selects the *status quo* alternative only when it is in the top cycle may look tyrannical, if cycles are common and if the *status quo* is usually supported by the same groups. If, as Riker sometimes indicates, cycles are almost omnipresent, and "anything may happen", the recommended system is "stable" in the sense that almost nothing ever happens. Although Riker tries to justify his preference for *status quo*-preserving institutions by appealing to the results of social choice, his argument requires an additional premise. Without a substantive ethical argument there is no reason why the problem should always be solved in favour of the *status quo*. More generally, it is clear that anti-majoritarian institutions (and at the limit, the unanimity rule) are effective in *maintaining* desired outcomes; majoritarian institutions are better in *obtaining* such outcomes (Dougherty & Edward, 2005).

An example of the tyrannical potentials of anti-majoritarianism is the political theory of John C. Calhoun, the theorist of the slave-owning South. Although Calhoun was afraid of "majority tyranny", his, as Riker's, ultimate concern was instability. In Calhoun's scenario, the competition between two parties would lead a "vibration" of power between the two competitors:

> These vibrations would continue until confusion, corruption, disorder, and anarchy would lead to an appeal to force—to be followed by a revolution in the form of government. Such must be the end of the government of the numerical majority (. . .). (Calhoun, 1853/1953, 33)

Unlike most conservatives of his era, Calhoun was nevertheless willing to extend the suffrage to all male citizens (but, of course, not to slaves). The general suffrage was harmless if the "numerical majority" was replaced by the "concurrent

majority", defined as the "negative power" of all important groups to exercise veto over all legislative proposals. This collective unanimity rule would not only create stability but "make it the interest of each portion to conciliate and promote the interests of the others" (p. 39). The ultimate aim of this "liberal" proposal was, however, to protect the social system of the old South. There, people still understood that "it is a great and dangerous error to suppose that all people are equally entitled to liberty". Rather, liberty is "a reward reserved for the patriotic, the virtuous and deserving, and not a boon to be bestowed on a people too ignorant, degraded, and vicious to be capable either of appreciating or of enjoying it" (pp. 42–43).

The case of Calhoun illustrates the fact that limitations on majority rule favoured by Riker do not, as such, protect individual liberty. Because of their non-neutral character, they favour the *status quo*, whatever that happens to be. We have seen (Sects. 2.1.1–2.1.4) that before the advent of democracy, anti-majoritarian decision-rules (like unanimity rules, qualified-majority requirements and multi-chamber systems) were the norm.[22] In earlier centuries, they worked for the basically illiberal ruling classes—including the slave–owners of the antebellum South. Anti-majoritarian institutions may increase system stability; yet, they may also create systemic instability just because they make individual decisions more stable by preventing changes. Being non-neutral, anti-majoritarian institutions favour some groups at the expense of others. While such devices may be useful in some contexts, *prima facie* they are unfair and likely to cause dissatisfaction.

5.4.4 The Meaning of Meaninglessness

According to Riker (1982, 237), "manipulated outcomes are meaningless because they are manipulated, and unmanipulated outcomes are meaningless because they cannot be distinguished from manipulated ones". Again, "since we can never be certain what 'true tastes' are—all we ever know are revealed tastes—we can never be certain when voting is strategic". Ultimately, this—like the earlier arguments of Wolff, Rowley and others—seems to be an *a priori* argument: We have cannot knowledge about voters' values and intentions, only about voting results ("outcomes"). However, the manipulation theorems proved in the theory of social choice say only that methods of vote aggregation are *in principle* manipulable. These results do not tell us how *likely* it is that actual elections and decision are manipulated. By definition, voters are voting strategically ("manipulating") when they are consciously voting against their true preferences in order to produce an outcome

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[22] Most classical political theorists rejected the unanimity requirement in practical decision making because of its anarchical consequences. The example used in the 18th century literature was the Polish Diet with its famous *liberum veto* (Sect. 2.1.2). John Calhoun, almost alone, saw the Polish experience in a positive light.

which is better for them than the outcome which would result if they had voted sincerely. In order to know that voters are voting strategically on some particular occasion, we have to know what their true preferences would be (or at least that they are not the same as their expressed preferences). Hence, we can find empirical examples of strategic voting only if we may at least sometimes know voters' "true tastes". Moreover, those practising successful manipulation also have to know at least as much. They must be able to find out voters "true tastes", for successful manipulation is impossible without such knowledge. But then, it must be possible for others, too.

Admittedly, it is often *difficult* to find out people's true beliefs and intentions, especially when there are very few or no recorded sources or when people have a motive to conceal their beliefs and intentions even *ex post facto*. Nevertheless, that is what historians, social scientists and journalists often try to find out.[23] Sometimes their endeavors may be hopeless, because the needed evidence is just not available. But their difficulties are practical and contingent, not due to any deep epistemological impossibility principle. Riker seems to fall into the traditional skeptical fallacy: Because misperceptions are often possible and sometimes unavoidable, we cannot have any *real* knowledge at all. *Liberalism against Populism* itself contains several attempts to reconstruct actual cases of strategic voting and of agenda manipulation, mainly in the Congress of the United States. The accuracy of his reconstructions has been challenged (Green & Shapiro, 1994, 109–111; Krehbiel & Rivers, 1990; Mackie, 1998, 78, and especially Mackie, 2003). Ironically, these challenges show that it is often difficult to find out whether successful manipulation has taken place. The contestability of Riker's examples, however, is not my main point. The main point is that if "true tastes" were literally *inscrutable*, and if "all we know" were "tastes" revealed in voting records, Riker could never succeed in his own reconstructions. Actually, Riker and others have shown that at least sometimes it is possible to say—if not with certainty then with a reasonable probability—that strategic voting has occurred. Consequently, sometimes it must also be possible to say that it has *not* occurred. We can find out by using the same methods Riker uses in his book: by making inferences from general voting patterns, from voters' ideological commitments and political interests, and, last but not least, by asking them or reading their own descriptions. In some cases, these methods are bound to produce uncertain and controversial results, but so is all historical research. For example, most studies on the British elections agree that a significant number of voters do vote strategically. Both analyses of the distribution of votes and interviews confirm this. However, it is not clear *how often* the British voters vote in this way; the estimates on the number of strategic voters in different elections vary between 5.5 and 17 % of all voters (Cox, 1997, 83–84). If by "an outcome" we mean "a majority in the House of Commons", we may say that it is a real possibility

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[23] For a concrete attempt to reconstruct some strategic voting-sequences in the Finnish Electoral College, and for the practical problems involved in the reconstruction, see sections 7.2.8–7.2.12.

that at least some British elections might have produced a different outcome had strategic voting not taken place. But there is also a real possibility that the outcomes of some British elections were *not* significantly affected by strategic voting.

A charitable reading of Riker's premise (3) in the argument (D) is this: quite often, it is very *difficult*, even practically impossible to say whether a particular outcome resulted from manipulation or not. But we know that, in principle, all voting rules *can* be manipulated. From empirical evidence we also know that manipulation sometimes occurs in practice. Hence, especially when an issue is seen as important (the stakes are high and other conditions of successful manipulation are present), it is quite possible that the outcome did not result from the amalgamation of "true tastes". Under this reading, Riker is freed from the accusation of *general* skepticism made by Mackie (1998). But one may ask whether this weakened argument warrants conclusion D(6): "we have to treat all outcomes as ethically meaningless". If we suspect that strategically-minded voters have sometimes decided the fate of the British Government, but we cannot know when this has happened, can we conclude that *all* the British election results have therefore been "ethically meaningless"? Here, the earlier distinction between "prudent voting" and "shrewd voting" becomes relevant. If we know that a decision—say, a legislative decision—resulted from a complex manoeuvre in which the most popular alternative was played out, we are tempted to say that the outcome is ethically meaningless. On the other hand, if a decision is reached by a compromise in which the decision-makers agreed to vote for their common second best, we may see the outcome as ethically acceptable ("remember, we all accepted it"). But in both cases, some decision makers voted strategically in the technical sense of the word, that is, against their true preferences.

The argument (E), based on agenda manipulation, is perhaps the most powerful of all the Rikerian arguments—*if* its premises are accepted. All other Rikerian arguments from (A) to (D) are based on the standard supposition of social choice theories that individual decision-makers have complete and transitive preference orderings over *given* sets of alternatives. The non-uniqueness argument (A) fixes the preferences and the agenda, and asks what would have happened if the voting rule had been a different one. The argument about strategic voting (D) asks whether the voter's voted against their true preferences. These arguments are based on counterfactual considerations. The argument about agenda manipulation (E) relies on a different counterfactual premise: had the agenda been a different one, people might have chosen a different outcome. But there is an important difference between the epistemic premises D(3) ("we can never know with certainty whether an outcome resulted from manipulation or not"), and E(3) ("we can never know with certainty what voters' true values are"). The notion of agenda manipulation presupposes a comparison between the actual and some non-actual agendas. The formal properties violated (non-manipulability in (D), path-independence in (E)) can themselves be defined only by referring to several preference profiles or agendas. Although arguments (D) and (E) are structurally similar, (E) may contain theoretical problems not involved in (D) because of the stronger counterfactual

supposition. Riker's point is not just that an agenda can be manipulated by deleting options from or adding them to a pre-given list, or by changing the voting order. Rather, political actors may change the outcomes by inventing new possibilities which divide existing majority coalitions and create new ones. *This presupposes that the underlying preferences are "already there"*. Preferences are fixed and can be found out by the manipulating actors.[24]

Here, we are confronted with another epistemic problem. It may be very difficult to know how people would have behaved if they had faced a radically different set of possible options. It may also be difficult for people themselves.. Even if voters have complete preference orderings over a *given* set of options, they need not have them over some other, *hypothetical*, sets. They certainly do not have complete orderings over *all* logically possible or imaginable sets. If the possibility of adding new options to the agenda is unrestricted, the number of logically possible agendas is infinite. Paradoxically, in order to show that *collective* preferences are indefinable in some possible cases, Riker has to suppose that the underlying *individual* preferences are well-defined over *any* possible domain. Without such a supposition, creation of new alternatives cannot be interpreted as agenda manipulation in the *social choice sense of the term*. Introduction of new issues and new solutions is not manipulative as such; quite the contrary, such an activity is an essential part of a politician's accepted institutional role. It becomes "manipulation" only when the voters already have well-defined preferences, and a cunning politician tries to change the outcomes (and the balance of power) for his or her own advantage by combining and subdividing issues.

People's preferences may be based on mistaken information, misleading propaganda, biases, self-delusions and framing effects. Therefore, they may be susceptible to certain forms of manipulation. However, these possibilities are not part of the *social choice* critique of democracy. Rather, they belong to the traditional anti-democratic argument running from Plato to the modern elite theorists: people are unreliable because clever demagogues and propagandists may mould their beliefs and preferences. Elsewhere, Riker adds: "In my opinion, most elections are manipulated, so the result is certain to be unrepresentative" (Riker, 1984, 106). This opinion is just an expression of faith (or rather, the lack of it). He explains further:

> All elections are subject to manipulation in the sense that artificial arrangements of the agenda (e.g. *the media's or politicians' stratagems to affect the salience of issues*) have as much effect on the outcomes as the values of the electorate. (Riker, 1984, 106; my emphasis)

Here, Riker's notion of "agenda manipulation" loses its original social-choice meaning and becomes almost a metaphor for all kinds of political activities. The necessary comparison point is a possible world in which there are *no* attempts to "affect the salience of issues"—that is, no campaigning, no lobbying, and no

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[24] Miller's argument for pluralism, discussed in Section is built on the same supposition (see Mackie, 2006, 9).

rhetoric. *This would be a world without politics as we know it*. The only thing we can know about such a world is that it would be very unlike ours. There is a danger that Riker's epistemic premises push his theory beyond any form of empirical verification or falsification. Rather than showing the inevitable meaninglessness of democratic results, Riker's account would show the irrelevance of the problem.

Keith Dowding's defence of Riker's (D)-argument against Mackie (2003) has a similar flavour:

> Tactical voting is voting for a candidate whom one thinks stands the best chance of winning, over those one prefers most. We virtually always vote for a candidate on the ballot paper. But how often do ballot papers contain the names of the person we would most prefer? (...) One can always avoid voting paradoxes by restricting the field to just two candidates. Restricting candidates to those who happen to want to stand, or have a party to back them, or the money to run themselves is another way of restricting the alternatives. (...) So Riker is correct: voting does not reveal our true preferences over all possible candidates (or ways of deciding an issue). (Dowding, 2006, 345)

In this argument, our present political practices are contrasted with a world in which we could vote *any* person (in that world). In effect, the argument makes *all* equilibria "structure-induced". The following comment of Riker illustrates the same problem:

> [Individuals] also respect and are constrained by institutions that are intended to induce regularity in society. And it is the triumph of constraints over individual values that generates the stability we observe. (Riker, 1982, 190)

The image is that of a space filled by free-moving particles bumping against the walls of institutional constraints. This picture is far too simple. *Institutions not only constrain possible choices (and hence, outcomes), they also make rational choices possible*. It is clear that human beings cannot have well-defined preferences over very large sets of alternatives. Even in an institution-free world, cognitive constraints would still exist. In a world inhabited by mere human beings, some mechanism, institutional or non-institutional, rational or a-rational, constrains our choices. Without well-defined individual preferences, *both* the notion of equilibrium *and* that of disequilibrium (in the limited sense used by the social choice theorists) would be inapplicable. In order to have a game, we need rules, but any system of rules has to constrain our choices—for example, of the number of candidates we can vote.

Ultimately, Riker and Dowding seem to argue that only a *completely unstructured choice* would be compatible with the "populist" ideal of democracy. But a completely unstructured choice is obviously impossible. Thus, populism is defeated. But this victory is too easy. There are possible models of democracy which are "populist" in Riker's (admittedly imprecise) sense but which are not committed to the implausible ideal of a completely unstructured choice

5.5 Epistemic Theories

5.5.1 Introduction: The Epistemic View of Decision-Making

The versions of populism discussed above were all versions of *criterial* populism. The "will of the people" or the "general will" was equated with the outcomes of some practically realizable voting rule such as the majority principle. An alternative version of populism is *epistemic*. Actual voting results do not constitute the will of the people; they only provide better or worse *evidence* about it.

Majority rule, like any authority-conferring procedure, seems to be an instance of what Rawls (1971) calls 'imperfect procedural justice'. Why would majority rule (for example) confer any legitimacy on the decisions made according to it? In spite of the alleged fairness of a decision-making procedure, we nevertheless suppose that there are substantive criteria for outcomes. Here arises the problem of authority. Suppose that I think that *x* is the best plan or policy and therefore should be enacted. I also think that a procedure *P* is authoritative and decisions made by it ought to be enacted. *P* decides for *non-x*. So I either seem to be committed to the inconsistent position that *x* and *non-x* ought both to be enacted, or I have to drop my initial view that *x* should be enacted; but in the latter case I submit my judgement to the judgement of somebody else. This seems to be incompatible with the demand of personal autonomy, the demand that I should be the independent maker of my own judgements. It does not matter whether *P* is a single autocrat or a democratically constituted body using the majority (or even the supermajority) principle: in both cases I submit my judgment to an alien will. [25]

There seems to be a way out. The fact that we regularly rely on epistemic authorities does not undermine our autonomy as moral beings, because their role in our practical reasoning is, in a sense, an instrumental one. We may change our initial judgement about the alternative policies for the rational reason that an authority or an authoritative procedure *P* provides us with new and reliable *information* about the consequences of policy *x*. Epistemic authority is sometimes a basis for practical authority: for example, doctors give us "orders", not just recommendations, and we generally take them into account because we believe that doctors know what our health requires. Thus, a doctor may act as a practical authority because he or she knows the most effective means to reach an end that is *already* important for us. If political authorities generally possess supreme knowledge and understanding of the ends and values that we, as citizens, share, it is rational to recognise their right to command us. We should obey authorities simply because we are then able to do better those things we want to do in any case.

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[25] Cf. Simmel (1908/1952) "It appears nonsensical that a man subjects himself to an opinion which he holds to be false, only because others hold it to be true". This problem is sometimes called "Wollheim's Paradox". It does not constitute a paradox in the logical sense; nevertheless, it highlights the central internal tension in many conceptions of democracy. Interesting comments on the subject are made by Estlund (1989) and Graham (1982).

The problem in this view is that it seems to be incompatible with the procedural nature of democracy. To quote Shirley Letwin (1989, 223):

> Would we want democracy if we had an access to indisputable knowledge of what ought to be done? The answer is, of course, no. Whether such knowledge were derived from God, history, science or nature, it would be folly if not sacrilege to let the ignorant decide. Any reasonable person would want to hand over public decisions to the sages or technicians who knew the truth.

Indeed, even if the knowledge of what ought to be done were not "indisputable" but just ordinary knowledge, it might still be unwise and imprudent to let the ignorant decide. Nevertheless, many theorists have tried to combine the epistemic view of decision-making with a defence of democracy. Since Aristotle, political theorists have argued that some collectives are more likely to reach correct solutions than their individual members (Landemore, 2013, Chapter 3). The largest collective is, of course, the people as a whole. The apparent beauty of this argument for democracy is that it relies on the same basic premises as the oldest and most influential of all anti-democratic arguments. We may indeed have better or worse knowledge about the common good, but even if it is true that an expert is likely to make better decisions than the average citizen all citizens together may nevertheless make better decisions than the best of the experts. Legitimate political authority remains a species of epistemic authority, but it may be possessed only by the people as a deliberating group. This view may be called *epistemic populism*. In her illuminative book, *Democratic Reason*, Hélène Landemore (2013) argues that epistemic democrats can be divided into two camps. One tradition, running from Aristotle to the modern theorists of deliberative democracy, argues that the "many" can be better to find the correct solution than the "few" because democratic deliberation may mirror individual reasoning at the collective level. The other tradition, starting with Condorcet although possibly anticipated by Spinoza, focuses on the epistemic properties of judgment aggregation when large numbers of voters are involved (Landemore, 2013, 53–54).

Landemore's "selective genealogy of the epistemic argument for democracy" is interesting but, indeed, somewhat selective. First, she does not place the epistemic argument for democracy into the wider context of the epistemic view of political decision-making. After all, most theorists who have emphasized the role of knowledge in government have not been democrats. Second, as she herself admits, some influential theorists—most notably Jean-Jacques Rousseau and John Stuart Mill—do not neatly fall in her categories. However, my aim is not to try to improve Landemore's genealogy. Instead, I shall problematize the basic argument shared by both traditions described by Landemore. There are two problems. Within both epistemic traditions it is difficult to conceptualize the role of *persistent opposition*. Moreover, it is not obvious that the epistemic views of decision-making are actually able to justify the crucial role of *democratic equality* (conceived as the combination of maximal inclusiveness and of effective equal participation).

5.5.2   *Reading Rousseau*

The most important modern sources of the democratic version of the epistemic conception are the writings of Condorcet and of Jean-Jacques Rousseau (1762/1973). In Rousseau's version, the general will always aims at the common interest or common good and a well organised community it "is everywhere fully evident and requires only good sense to be perceived". According to this view, the common good or interest is the counterfactual result produced by an ideal procedure. The real-life democratic procedures may, in suitable conditions, tell us what the results of an ideal procedure might be. There is, then, "a will of the people beyond an election result". According to Rousseau

> There is often a great deal of difference between the will of all and the general will; the latter considers only the common interest, while the former takes private interest into account, and is no more than a sum of particular wills; but take away from the same wills the pluses and minuses that cancel one another, and the general will remains as the sum of the differences. (Rousseau, 1762/1973, 185)

Although Rousseau's general will or general interest cannot be equated with any actual procedure, it is nevertheless dependent on the individual wills or interests. (Indeed, it sounds as if Rousseau had a Borda-type procedure in his mind.) If, however, the general will or interest is dependent on individual interests the problems analysed by Arrow and Riker remain. To quote Estlund (1989, 1321):

> Suppose the content of the general will is the common interest (on socially significant issues). Surely the common interest must be some function of individual interests, probably representing what is in the interest of every citizen. *The general point is that if it is any function of individual rankings, Arrow's arguments apply.* [My emphasis]

In Estlund's view, a more promising strategy to define the general will is to see the deliberative processes as means for *discovering* the common good or general interest rather than for constituting it. The common good or general interest has to be at least partly independent of the process of discovering its content. Democratic methods, like voting, are methods for acquiring the relevant knowledge. Individual voting acts express voters' *beliefs* about the content of this common good. This view combines the epistemic interpretation of collective decision-making with a cognitive interpretation of voting. Jean-Jacques Rousseau expressed the same idea in the famous passage:

> When a law is proposed in the People's assembly, what they are being asked is not exactly whether they approve the proposal or reject it, but whether it does or does not conform to the general will, which is theirs; everyone states his opinion about this by casting a ballot, and the tally of the votes yields the declaration of the general will. Therefore, when the opinion contrary to my own prevails, it proves nothing more than that I have made a mistake, and that what I took to be the general will was not. (Rousseau, 1762/1973, 250)

In this view an independently defined common interest or good may be a subject of correct or incorrect judgments. A will is "general" as long as it is directed towards this common good or interest. Voting outcomes are important because and insofar as they provide evidence of the content of an independently existing

interest which cannot be reduced to individual interests. This evidence is necessarily imperfect, at least for three reasons. First, voters may err about the content of the general will; second, they may choose to express their particular interests rather than their opinion about the common interest; third, the aggregation rule may be faulty. Joshua Cohen argues that

> an epistemic interpretation of voting has three main elements: (1) an *independent standard* of correct decisions—that is, an account of justice or of the common good that is *independent* of current consensus and the outcomes of votes; (2) a *cognitive* account of voting—that is, the view that voting expresses beliefs about what the correct policies are according to the independent standard, not personal preferences for policies; and (3) adjustments that are undertaken in part in light of the evidence about the correct answer that is provided by the beliefs of others. Thus, the epistemic conception treats processes of decision making as, potentially, rational processes of the formation of common judgements. (Cohen, 1986, 34)

When an independent social good is presupposed, the one and same question can be addressed to all voters: "Is this rather than that policy in accordance with the common good?" The paradigmatic example of this is not, as in the Rikerian or in the utilitarian view, an election of an official. Rather, it is a referendum (cf. Nino, 1996, 147). Suppose that voters are asked to give an affirmative or a negative answer to the question "Should abortions be allowed?" Here, voters are definitely not supposed to consult their personal interests or "tastes" when answering the question. The question may have no personal relevance to some voters, and it is odd (indeed, an expression of bad taste!) to say that someone has a "taste" for abortions. Instead, voters are asked whether they consider it a good or bad thing to have abortions allowed. They are asked to make a judgment about the requirements of the social good. In this version of epistemic populism, voting has a purely epistemic role. True, in the utilitarian theory voting has an epistemic role too. Voting outcomes are not equated with the social good itself—rather, they provide evidence about it. However, in the utilitarian theory of democracy, at least in its Benthamite version, the task of *voters* is not to find out what the social good requires, but to express their personal interests. In the utilitarian versions, the social good or the common interest, is supposed to arise as an *unintended* outcome of the self-interested choices.

We saw how epistemic interpretations of collective decision-making seem to lead to the problem of epistemically justified elitism. Why suppose that the democratic methods are a better way to acquire the required knowledge than the judgment of some *avant-garde* or of a board of experts? Why suppose that the *maior pars* is automatically the *sanior pars*? Many liberals, Riker included, have criticized the epistemic conception of the general will. It has often been argued that this notion, at least in its Rousseau-inspired form, provides a rationalization for the modern pseudo-democratic tyrannies (Kelsen, 1955; Talmon, 1952). This accusation is not totally groundless, for historically, the notion of "general will" (and its conceptual relatives like "the national will") has indeed been used as one justification for "democratic" dictatorships. Those who have regarded themselves as able to recognize the true content of the general will have adopted a paternalistic stance towards those considered to be less able in this respect. Voting results were declared

"undemocratic" when they have been considered not to be in accordance with the supposed general will but merely expressed "the will of all". The fear of this epistemically grounded authoritarianism was one of the central themes in the sceptical post-War liberalism.[26] In her critical history, Amadae (2003) connects the rise of the theory of social choice to this strain of thought. Consider the way Kenneth Arrow motivated some of his conditions:

> To assume that the [social] ranking does not change with any changes in individual values is to assume, with traditional social philosophy of the Platonic realist variety, that there exists an objective social good defined independently of individual desires. (. . .) Such a philosophy could be and was used to justify government by the elite, secular or religious. (Arrow, 1951/1963, 22)

This sceptical theme is also present in the later interpretations of the social choice results. In their *Introduction to Positive Political Theory* (1973) William Riker and his co-author, Peter C. Ordeshook took Rousseau's view as their target:

> Rousseau distinguished between "the general will", which seems to have been defined as what was objectively right for a society, and the "will of all" which he defined as a social outcome arrived at by the amalgamation of all the individual preferences. As is well known, Rousseau wished to construct a society in which the general will would triumph over the will of all. (p. 91)

In terms of the theory of social choice, this means that the "general will" can be *imposed* over the society, independently of the individual preferences. According to this reading, Rousseau was, in spite of his democratic rhetoric, ultimately an epistemic elitist. In his later writings, however, Riker criticized Rousseau for the very opposite reason (Riker, 1982, 11; 1992), without commenting this change of interpretation. In this later interpretation, Rousseau's "general will" *is* equated with actual amalgamation of social preferences, in other words, with majority voting. This interpretation makes Rousseau a defender of the tyranny of numerical majorities. In other words Riker's target in his later writings is *criterial* populism (or simple majoritarianism), while the target of his earlier comments (and of the traditional liberal critique of Rousseau, expressed, for example, by Constant, Kelsen or Talmon) was *epistemic* populism. In effect, Riker seems to hold two distinct but equally unsatisfactory interpretations of Rousseau's basic notion. Either the general will is simply equated with the unqualified will of a majority, in which case it shares all the problems of criterial populism. Or then, the general will is completely independent of the empirical will of the people—in which case it can be legitimately imposed by an enlightened minority.

What was Rousseau's real view? It is clear that, by introducing his famous distinction between *volonté général* and *volonté de tous*, Rousseau rejected the first

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[26] Cf. Talmon (1952, 48): "The very idea of an assumed preordained will, which has not yet become the actual will of the nation; the view that the nation is still its infancy, a 'young nation' in the nomenclature of the *Social Contract*, gives those who claim to know and to represent the real and ultimate will of the nation—the party of the vanguard—a blank cheque to act on behalf of the people, without reference to people's actual will."

alternative. Riker notwithstanding, Rousseau was not a criterial populist. Does this make him a supporter of the anti-democratic argument? This dilemma is sometimes conceived in terms of "procedural" *vs*. "substantive" interpretations of the general will. However, if Cohen's interpretation of epistemic populism is applied to Rousseau, the issue is more complicated. Even if the general will is conceived as an *ideal* procedure, there is still the question whether democratic *real* procedures produce better evidence on the content of the general will than some epistemically privileged *avant-garde* or *sanior pars*. Here, it is important to notice that although, according to Rousseau, the object of the general will was the common good, the language of "will" and of "choice" was still indispensable in his theory. As he says, "There can never be any assurance that a private will is in conformity with the general will until it has been submitted to the free vote of the people".

It seems that the general problem is insoluble: while the free vote of the people is indispensable, there is no way to guarantee that it actually expresses the general interest rather than the numerous particular interests. Rousseau says in *The Social Contract*:

> ..if the clashing of particular interests made the establishment of civil societies necessary, the agreement of these very interests made it possible. The common element in these different interests is what forms the social tie; and were there no point of agreement between them all, no society could exist. (Rousseau, 1762/1973, 282)

Rather than just postulating the infallibility of majorities, Rousseau argues that *under certain very specific social conditions* the "will of all" (as expressed in majority decisions) tends to agree with the general will. In order to have a common good, there has to be some degree of consensus in a society. To use the jargon of social choice theories, when there is a general will in Rousseau's sense, Arrow's universal domain condition does not hold. Some preference orderings are not allowed to be the inputs of social choice. If, however, there are profound disagreements the general will could be reached only by a policy of exclusion. As Rousseau says, those who do not accept the initial contract may leave the community.

Cohen provides us with a more precise idea of what a general will of this type might mean:

> According to the epistemic *populist*, the "independent standard" is a "general will" or "popular will". A group has a general will if (1) the members of the group share a conception of the common good; (2) the members regard the fact that an institution or policy advances the conception as a reason for supporting it; (3) it is fully common knowledge that the conception is shared; and (4) the conception is consistent with the members of the society regarding themselves as free and equal. (Cohen, 1986, 34)

Cohen's own example is a society where the content of the general will is given by Rawls' liberal theory of justice (Rawls, 1971). The society in question can be said to be regulated by a general will if there is a publicly shared view that institutions and policies should at least satisfy Rawls' key principles: the difference principle, the principles of the priority of liberty, and the equality of opportunity. Thus, this type of general will presupposes a stable and deep-rooted agreement on certain basic principles or values. Agreement on these basics is compatible with

disagreements about particular institutions and policies. These disagreements are partly factual, of the form "Is this policy best suited to the principles we all share or not?" But the disagreements are not simply factual in the sense that they could be solved by an independent expert. The epistemic populist claims that when there is a general will, majoritarian decisions preceded by public deliberation guided by it can provide good evidence of which decisions would be best.

It should be recognized that the limitations put on the domain, rather than the epistemic view as such, is the real solution provided by Rousseau and Cohen. Here, Rousseau agrees with numerous modern authors who have wrestled with Arrow's problem (Sect. 4.2.4). In his brief but insightful treatment of Rousseau, Arrow himself refers to the possible connection between the general will and domain-restrictions (Arrow, 1951/1963, 81–86). Moreover, both empirical theorists of democracy (Dahl, 1989, Chapter 18) and many normative theorists (Berg, 1965) have claimed that a working democracy requires at least a minimum amount of consensus or agreement on "the basics". It *may*, for example, be the case that the single-peakedness condition or some similar value-restriction generally holds in actual polities. Then there is normally at least a general "agreement on the nature of disagreements". But if such a consensus actually exists in modern democracies, do we have any specific reasons to believe that democratic institutions are the *cause* of this consensus? Could it just be a happy accident? To put it in a more concrete way: do the citizens of democratic countries share a conception of the common good because they live in democracies, or do they live in democracies because they happen to share a conception of common good? According to Rousseau, the conditions for a polity ruled by the general will are very demanding: the general love of freedom, a small *polis* initially established by an agreement, relative economic equality, and the existence of a shared civil religion. If these conditions do not hold, it is quite possible that there is no good or interest which would be common for the whole society. The extreme interpretation of this is that Rousseau's ideal society must be strictly homogeneous. But this seems to be incompatible with the central role of "the free vote of the people". In a strictly homogeneous society where people basically agree on everything, there is no need to take a vote[27]; we may realize the General Will simply by picking an average citizen and letting him or her act as the dictator who is entitled to pronounce the will of the entire society.

5.5.3 The Jury Theorem

According to epistemic populists such as Rousseau, majority voting, when practised in suitable conditions, provides good evidence about the general will. But, as Kelsen (1955, 2) asked, how can we know that the evidence actually *is* good? Coleman and Ferejohn (1986, 17) present the following dilemma for epistemic

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[27] Both Carl Schmitt on the Right and Max Adler on the Left argued in this way; see Sect. 6.1.2.

populists. If there exists an independent general will, then either we can recognize its content or we cannot. If we cannot, it is uninteresting: but if we can, we recognize it either by voting only or by both voting and in some other way as well. If we can recognize the general will by some other means, it cannot be a part of the justification of democratic institutions that they are needed to reveal the general will. If there is an independent way to reach the content of the general will (say, philosophical argumentation) why not use that method instead of voting? On the other hand, if the general will can be revealed *only* by voting, we have no way to assess the reliability of voting as a source of evidence.

For argument's sake, let us suppose that the general will can be known. If it can be known, it seems plausible to say that it can be known by means other than by voting. We say, for example, that people living under a dictatorial government want more freedom, although they have no means to express their will in elections. Mass demonstrations, public petitions, opinion polls, and even "the general mood of the people" as sensed by a competent independent observer may provide us with evidence about the general will. At the same time, such evidence may still be less reliable than the information provided by voting. Voting may be not the only, but the *best* method of getting evidence about the content of the general will. Most notably, voting could be a better indicator of the general will than consulting some enlightened *avant-garde*. But why would it be the best method? According to Coleman and Ferejohn,

> while it is true that, if we have no independent access to the nature of the general will, then we may be unable to determine whether or not a voting rule is in fact reliable, the epistemic populist is trying to specify the conditions under which a voting rule could be justified, not the conditions under which we would know that it was. The voting reliabilist would deny that in order for a voting rule to be justified we must also know that is a reliable guide to the nature of the general will. It simply must be reliable, independent of our knowledge of its reliability. (Coleman & Ferejohn, 1986, 18)

This answer is a *non sequitur*. An enlightened *avant-garde* (the *sanior pars*, the Jacobins, the Bolsheviks) could equally claim that its opinion is the most reliable guide to the nature of the general will. We have to have some method of judging between these competitive claims of epistemic authority.

Compare voting with any method of finding evidence on some external fact. When we say that a physical experiment is a reliable source of scientific information, we do not mean that there is another, independent method of getting the *same* information, a method which could be used as a yardstick for assessing the reliability of the first method. For how do we know that the second method is reliable? And if we knew this, why not use the second method only? We know that a method is reliable if there are some independent *theoretical* reasons to believe in its reliability, reasons which are related to our explanation of how the method is supposed to work. Ultimately, reliability judgments are supported by the general coherence of our beliefs. We judge a particular thermometer as reliable if it gives the same results as other thermometers, but generally we rely on thermometers because we accept the physical theory that explains their workings (and also explains why ordinary thermometers are unreliable when, for example, the

temperature falls under −50 C). A reliabilist may answer that this is not true in respect with all sources of knowledge. An experienced doctor may have developed a 'diagnostic eye'—she may be able to give a correct diagnosis without necessarily being able to explain *how* she makes it. We can use her as a reliable source of evidence. But in this case there are independent means—say, X-rays—of testing the reliability of her judgment. And these methods do have theoretical support. The same holds with voting. We need an independent justification for voting as a source of evidence of the content of the general will. We should be able, for example, to justify the claim that a majority is more reliable in its judgments than some self-proclaimed *avant-garde*. The required justification cannot be another, more reliable method, but must be a theoretical account that explains what a voting rule is supposed to do. Such an account would also indicate when voting is *not* a reliable source of evidence, for example, when a voting rule is defective.

There exists such a theoretical account. The *Condorcet jury theorem* shows that if there are only two possible kinds of answers to a question—correct and incorrect ones—and if the average probability of an individual voter answering a question correctly is greater than 0.5, the probability of getting the correct answer from an absolute (simple) majority of a group of voters is higher than the average, and it increases rapidly as the size of the group increases. Here the epistemic populist can find support for her confidence that majority voting provides reliable evidence on the content of the general will—supposing, of course, that the content of the general will *is* a matter of truth or falsity (Cohen, 1986, 35; Estlund, 1993; Grofman & Feld, 1988; Martin, 1993, 142–144; Nino, 1996, 127; Waldron, 1990, 63–64). This argument is *prima facie* an appealing one. It *seems* to solve the twin problems of democratic authority and of epistemic elitism. The authority of democratic procedures becomes a species of epistemic authority. There is genuine knowledge about the common good; but the best source of this knowledge is people as a whole. Thus, the result challenges the old wisdom, expressed by F. A. Hayek (1960, 110), that majority decisions "are bound (. . .) to be inferior to the decisions that the most intelligent members of the group make after listening to all opinions".

In what follows I shall point out some problems in this argument. The Jury Theorem is based on several presuppositions:

(i) There exists a correct alternative.
(ii) Voters have to choose between only two alternatives.
(iii) The voters vote sincerely, not strategically. They are striving for truth, not trying produce the most preferred outcome.
(iv) Votes are independent of one another.
(v) The average competence of the voters—that is, their probability to vote for the correct alternative—is over 0.5.

The Jury Theorem also seems to provide a coherent interpretation of Rousseau's version of populism, an interpretation that does avoid the problems involved in the two traditional interpretations discussed above (Grofman & Feld, 1988; T. Pateman, 1988; Waldron, 1990). It is not my intention to argue that Rousseau was actually influenced by Condorcet's arguments. Such a claim would be highly

implausible: Condorcet published his results only after Rousseau's death. More-over, although Rousseau often used geometrical analogies in *The Social Contract*, the probability theory applied by Condorcet seems to be entirely alien to him. By contrast, Condorcet, like all the important figures of the French Revolution, had certainly read Rousseau. All conditions (i)–(v) of the Jury Theorem are, in some sense, already present in Rousseau's argument. In ensuing sections, I shall go through them one by one.

5.5.4   The Jury Theorem, Binary Choices, and Riker's Problems

Epistemic populism is often suggested as a solution to Riker's problems (e.g. Cohen, 1986).The Jury Theorem shows why majority rule is a reliable method of finding the truth when there are only two alternatives (supposition (ii) above). Actually, the dichotomy requirement is also a domain restriction of a sort. Both Radcliff (1992a, 44–45) and Nino (1996, 136) see the dichotomy requirement as a way of avoiding the problem of majority cycles (C):

> Arrow's paradox arises only if there are three or more options. This condition does not apply when a democratic process is seen as an aggregation of judgement justifying a certain balance of preferences, as opposed to a mere aggregation of judgements expressing those preferences. Judgemental deliberation implies deciding between only two options: the truth or falsity of the judgement which is the object of decision. (Nino, 1996, 136)

However, Nino realizes (p. 136) the implication of this solution: complex questions should be decomposed into sequences of binary (yes-no) choices. He admits that this raises "serious problems of setting the agenda and ordering the questions". In other words, Riker's agenda problem (E) is still there. If issues are complex, an attempt to reduce complex political choices into the yes-no format only conceals the underlying problems of social choice. And if it is necessary to introduce more than two alternatives, we have to face Riker's non-uniqueness problem (A). There are many possible ways to vote.

Condorcet himself proposed an answer to the problem of non-uniqueness. Although his writings are not always easy to interpret, he seems to recommend a particular voting rule. According to the rule, every voter writes down her full rankings among all the possible options, pairwise comparisons are used to find out Condorcet winners, and if there is no Condorcet winner, the relative size of the majorities should determine the outcome. (The exact nature of the method proposed by Condorcet is not clear; for one interpretation, see Young, 1988). Condorcet's solution is in the spirit of his Jury Theorem. Because majority voting is a reliable method in dichotomous cases, more complex choices should be pared down to a series of dichotomous questions: "Which of the two alternatives x and y is the better one?" And because wisdom is in numbers, large majorities are more likely to be right than narrow ones. The supposed existence of the optimal rule solves

non-uniqueness problems (A) and (B) as well as the problem of cycles (C). How-
ever, Condorcet admitted that his ideal method of using a complete series of
pairwise comparisons is impractical in general elections. When there are
n candidates, every voter has to answer $n(n-1)/2$ questions. With ten candidates,
for example, this means 45 comparative judgments. The problem is not only that the
method may be too demanding for individual voters. With a large electorate, it may
also be computationally unfeasible. For general elections, Condorcet recommended
a much simpler system known later as the Bucklin or the Grand Junction rule.[28]

   These considerations bring us back to the non-uniqueness problem. Condorcet's
ideal rule may be practically unfeasible but it is by no means clear that his second-
best proposal, the Bucklin rule, is unique in the sense of being "the most practical,
the simplest, and the least subject to the influences of parties and intrigues" as
Condorcet supposed. (According to the testimony of Hallett and Hoag, the rule *was*
subject to intrigues—see Sect. 4.3.3). In an article "Epistemic Democracy: Gener-
alizing the Condorcet Jury Theorem" (2001) Christian List and Robert E. Goodin
(see also Goodin, 2003) seem to provide a surprising new solution to the
non-uniqueness problem. They calculate the probabilities of choosing the correct
option when the number of options (k) is higher than two, and the probability of
each individual voter for voting the correct option is higher than $1/k$. List and
Goodin compare various well-known voting-rules (plurality, complete pairwise
majority comparisons, Borda and alternative vote) under different scenarios. Of
course, the number of possible scenarios—the different distributions of individual
probabilities—is so large that they can deal only with a very small sample. Never-
theless, their results seem to indicate the following. First, if there are three or more
options but the probability of each individual voter voting for the correct decision
remains higher than 0.50, *all* the voting rules studied by List and Goodin are almost
infallible even with a relatively small electorate (51 voters). Second, if the proba-
bility of each individual voting for the correct decision is just slightly over $1/k$, and
not higher for any other option, relatively small electorates (301 voters) perform
significantly better than their individual members. Third, there are no dramatic
differences between the epistemic performances of various voting rules. For exam-
ple, when there were three options and 51 voters, and the individual probabilities
were 0.4 for the correct choice and 0.3 for the both incorrect choice, the plurality
rule picked the correct option with the probability 0.666, the pairwise rule with the
probability 0.740 and the Borda rule with the probability 0.760. For most scenarios
analyzed by List and Goodin, the differences between the epistemic performances
of various rules were smaller than this. Their main conclusion is that any of the

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[28] This, at least, is how I read Condorcet's account in his *Plan du constitution* (Condorcet 1793/
1847, 395–402). To be more exact, he proposes that thrice as many candidates as there are vacant
seats should be selected in a primary election by using the SNTV-rule. After that, voters should
rank these candidates, and the final choice should be based on (what we now know as) the Bucklin
rule. Although Condorcet's "ideal" method has raised considerable attention among social choice
theorists (Risse, 2001; Young, 1988), no one has (as far as I know) commented on his second-best
solution. On the Bucklin (or the Grand Junction) rule, see Sects. 3.1.4 and 4.3.3.

standard decision-rules is pretty much as good as any other. *If* there are correct options (supposition (i) above), and *if* individual voters have some ability in recognizing them (supposition (v)), *all* the minimally reasonable rules seem to choose the same outcomes in most cases. We are at liberty to choose among them, according to their varying procedural merits, without fear of any epistemic consequences. The binarity requirement (ii) can be dropped, and with it, Riker's non-uniqueness problem (A) seems to lose its relevance.

David Estlund has, I think, found a fatal weakness in this argument (Estlund, 2008, 228–230). In the standard two-alternative case, the original competence premise (v) simply says that the probability that an average voter hits the right solution should be over 0.5. In other words, his or her opinion has to be more reliable than a random guess. This sounds quite undemanding. In the case of several—say, k—options, the corresponding condition says that the probability to pick the correct option should be higher than $1/k$. For example, suppose that there are three options, a, b and c. Let the option a be the correct one. The competence condition is satisfied, if the respective probabilities are, for example, 0.34, 0.33 and 0.33—again a rather innocent-sounding requirement. Now, let us present the *same* choice in a binary form. The voters have to choose between two alternatives: either a is implemented or then there is a further choice (made by the voters or by somebody else) of implementing either b or c. In this presentation, the Jury Theorem holds only if the probability of an average voter to pick the correct option a is > 0.5 and *not* 0.34! As Estlund (p. 233) says, the problem shows that the assumption that voters are better than random choices is by no means obvious or trivial. Many real-life political choices are choices between complex combinations of options. Shall we build a new road at all, and if we shall, should it go here or there? The problem may be presented to the voters in different ways, and, as we have seen, the way it is presented and the order of the presentation of alternatives may sometimes determine the outcome. If there is no unambiguously correct way to present a given problem, the competence assumption begins to look quite demanding. For then it means that, *whatever the form of the presentation of the options*, an average voter is more likely than not to pick the correct option. This means that the average voter is able to recognize what would be the "correct agenda"—whatever that might mean. In effect, Riker's agenda problem (E) blocks this solution to the non-uniqueness problem (A).

5.5.5   The Problems of Democratic Authority in Epistemic Populism

There are further reasons why the version of populism based on the Jury Theorem is unable to justify our democratic practices. These reasons are not directly related to the social-choice problems, but they may still be damaging. First, contrary to the widespread claim, *Condorcet's Jury Theorem does not, strictly speaking, constitute*

an argument for democracy at all—except when applied to relatively small communities. For the Theorem does not give any support to the twin principles of maximal inclusion and of equal voting power. The Theorem is only an argument for collective decision-making based on majority rule (or, if we accept the results of Goodin and List, on some reasonable extension of it). The Jury Theorem seems to show that large groups perform better on decision-making than even the best among experts. But it does *not* show that the decision-making group has to be coextensive with the group of all adult citizens. According to the Theorem, the epistemic competence of majorities increases rapidly when the size of the group increases: this competence is strictly a function of the *absolute* size of the group. If the average competence is slightly over 0.5, the majority in a group of, say, 100,000 citizens, is already almost infallible. And *no further increase in the size of the decision-making group would have any significant epistemic impact. Ceteris paribus*, a large modern state where only five percent of the adult population is entitled to participate in decision-making is, according to the Theorem, practically as effective a truth-seeker as a democracy.

Of course, if the average competence were *very* near to 0.5 (say, 0.50001) a further increase of the group might be motivated. But such exact measurements of competence do not make sense; and *if* they did, it might be safer to apply them at the individual level and include only those citizens who are found as sufficiently competent. Notice that if the average competence is slightly *below* 0.5, the competence of majorities approaches zero when the size of the group increases! Thus, the epistemic view may well be used as the basis of unequal distribution of political rights.[29] Again, the pre-democratic practices may be used as examples: the opponents of the Papal supremacy (for example Marsiglio of Padua and Nicolaus Cusanus) used one (Aristotelian) version of the epistemic argument to show that the general Councils of the Church were less likely to err in spiritual matters than the Pope acting alone. But the medieval theorists never extended the right to participation outside the small circle of bishops, abbots and leading theologians. In the Church and in secular assemblies, the normal presupposition was that because wisdom was unequally distributed, power should also be unequally distributed.

How should we assess citizens' competence? If we accept the authority of democratic procedures because we believe that majorities tend to give right answers, we ultimately base the *practical* authority of majorities on their *epistemic* authority. There is nothing odd about this. The authority of a medical expert, for example, is practical—doctors write prescriptions for us, not just recommendations—but a medical expert's practical authority is based on her epistemic authority. Why do we trust medical experts? We can recognize a medical expert by relying on the authority of other medical experts: the medical profession itself decides who is a competent practitioner of the profession. Ultimately, however, the authority of the

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[29] This makes the interpretation of Rousseau in terms of the Jury Theorem problematic, for Rousseau clearly considered political equality as a necessary condition of legitimacy.

medical profession is justified by its past performance. Epistemic authority can be justified only inductively: if doctors have been able to help us in the past, it is reasonable to follow their advice when ailments strike again. The answer to the general question of the competence of epistemic authorities, then, is: "By their fruit ye shall know them". The problem with the authoritativeness of democratic procedures is that we may continue to disagree on the rightness of political decisions even when we see the consequences. Suppose that a there is a religious minority which thinks that the observance of certain religious norms is a part of the common good. The secular majority consistently makes decisions that ignore the norms. Inductively, the minority has to conclude that the probability that an average secular citizen makes correct judgment on matters of the common good is poor (lower than 0.5), and therefore even the Jury Theorem supports the conclusion that matters pertaining to the common good should be trusted to religious authorities. If people disagree on the content of the common good, they are also likely to disagree on decision makers' ability to find out what the common good requires.[30]

All this is directly related to the legitimacy of democratic authority. In some contexts, the majority opinion may be taken as epistemically authoritative. Suppose that I try, together with ten other people, to solve a mathematical problem. When the task in concluded, I realise that all the others have reached a different solution from me. Unless I know that I am a superb mathematician, I have a rational reason for concluding that the others have got it right, even when I cannot follow their reasoning. Rousseau thought that the fact that the majority disagrees with me about the common good is a similar reason for me to change my view about the nature of the common good. But is it? In pluralistic conditions, we may continue to disagree on the rightness of political decisions even when we see the consequences. I may believe that policy *x* is better than policy *non-x* and that, therefore, policy *x* ought to be implemented. However, I may recognize that the majority supports the opposite opinion. This fact may cause me to withdraw my view that policy *x ought* to be implemented under present circumstances. But the epistemic justification of democracy requires more: if the majority disagrees with me, I should also reject my initial judgement that *x* is *better* than *non-x* (Estlund, 1989, 148).

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[30] Rex Martin (1993) has argued that there is good reason to believe that individual citizens are more likely to be right than wrong in their political judgments. He thinks that "each voter is, more likely than not, able to judge that a policy or law is his or her *own* perceived interest" (Martin, 1993, 138; see also Nino, 1996, 117). This is the Millian idea that people are the best judges of their own interests. However, the point of the Jury Theorem is that all voters are searching an answer to the *same* question. This need not be true, if voters are trying to answer the question "Which policy is in *my* best interest?" In other words, they are the egoist voters presupposed by the utilitarian model. Thus, we have returned to the utilitarian problem of particular and general interests. If voters vote according to their own interests, and are generally the best judges of their own interests, their competence in answering correctly the question asked in elections is high. But because their interests may diverge, the Jury Theorem is, in this case, irrelevant. Or, then, the voters try to find out what the common good requires, and the Jury Theorem is relevant, but Martin's argument gives no additional reason to believe that they are at the sufficient level of competence.

For the same reason, the epistemic interpretation of democratic decision-making is troubled by a motivational problem. Suppose that I am participating in democratic decision-making. Together with the others, I accept the ideal that our decisions should be optimal in epistemic terms, based on the best possible knowledge. Accordingly, I think that I am under a duty to contribute to our common search of truth (supposition (iii) above). I should try to maximize my own epistemic contribution. What is the most rational thing for me to do? Knowing the content of the Jury Theorem, I recognize that the majority in our democratic community is much more likely to find the correct solution than I myself. I may suspect that my competence to hit to the correct solution is not much higher than the critical 0.5, and it may even be lower. The majority, on the other hand, is known to be almost infallible. In epistemic terms, for me the most rational thing to do is to try to *find out what the majority thinks and to vote with it*. And if I have reasons to suspect that my personal competence is below the average, my voting with the majority rather than trying to make up my own mind actually increases the total competence of the group. But, of course, the more numerous are those who think in this way, the smaller is the epistemic competence of the majority, for our votes are no more independent of each other.[31] At the limit, where we *all* try to rely on the majority opinion, there is no majority opinion to be relied on. I think that this kind of collective action problem is a real one in some decision-making bodies.

Indeed, there is a further problem. Suppose that a majority decides to vote for *x*. However, there is a strong opposition (say of 45 %) which insists, even after the decision, that the correct alternative would be non-*x*. In other words, a significant number of the members of the decision-making group refuses to accept the epistemic authority of a procedure which is supposed to be almost infallible. The very existence of a significant post-decisional opposition seems to be evidence against the hypothesis that the average competence of the total group is over the required 0.5!

Thus, the epistemic argument for democracy proves "too much". If democratic processes either define, or provide the best evidence about the content of the common good, the outcomes of democratic processes would provide *conclusive* reasons for citizens to change their views about the content of the common good. The problem shared by all versions of epistemic populism is that, according to them, *persistent opposition* is unreasonable. We usually think not only that opposition is often reasonable, but that it actually plays a vital role in the continuous functioning of democracy. In other words, it may be perfectly reasonable to think that *x* is the policy that—given the democratic verdict—should be implemented, but *non-x* is nevertheless the best policy (Goodin, 2003, Chapter 7). In a sense, the task of a normative theory of democracy is not only to justify the power of majorities. It

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[31] To quote Hayek again: "Only a complete misapprehension of the process by which opinion progresses would one lead to argue that in the sphere of opinion he ought to submit to majority views. To treat existing majority opinion as the standard for what majority opinion ought to be would make the whole process circular and stationary." (Hayek, 1960, 115).

is equally important to "justify" *minorities*; most importantly their right to dissent even after the decisions have been made. However, epistemic theories are unable are unable to perform the latter task. One possible way out from this problem is to distinguish between different decisions. If values, unlike factual issues, are *inherently* controversial, and if democratic decisions invariably have a value aspect, persisting opposition may be justified even in the best of all worlds when the issue being deal with is a value-issue. Robert Goodin uses this strategy in his book (Goodin, 2003). According to him, democratic processes possess an epistemic authority in factual questions but not in evaluative questions. He states:

> The epistemic power of majorities, when dealing with intersubjectively shared facts, is what underwrites the rationality of majority rule. Their lack of any epistemic authority, when it comes to matters of evaluations, is what underwrites the rationality of persisting opposition. (Goodin, 2003, 145)

As Goodin himself remarks, his arguments turn the traditional view upside down. According to the traditional view, *facts* are objectively ascertainable, and could be left for the experts, while *values* are inherently controversial, and should be chosen in a democratic way. But if democratic processes have no authority over value-issues, we may equally refuse to accept democratic decisions as substantively correct. Why, then, should they have any authority over us in value issues? If we have the right to stick to our opinion that *x* would be the best policy, why should we defer to the majority decision that *non-x* ought to be implemented—supposing that the issue in question is a value-issue? The supposed epistemic authority of majorities over factual issues does not explain this. We do not generally think that if someone is an epistemic authority—say, the leading scientific expert in his own field—his *value judgments* must therefore bind us. The problem with Goodin's solution is that his distinction between factual issues and value issues moves us back to square one. The authority of democratic processes cannot be explained in epistemic terms. If we have to comply with "Hobbesian" reasons (in order to prevent strife), there is still no explanation why we have to comply with the judgments of the *maior* rather than the *sanior pars*, when these happen to be different groups.

5.5.6 Deliberation vs. Aggregation

The recent resurrection of the *deliberative* ideal in democratic theory could be seen partly as a reaction against the interest-based conceptions of democracy that have flourished since the Second World War. Such ideas include the utilitarian conceptions, the Schumpeterian elitist-realist tradition, and various versions of competitive pluralism and the theory of public choice. The theory of social choice discussed in this work has obvious affinities with these interest-based conceptions. Although the preference inputs used in social choice-models need not be interpreted in terms of interests, they treat preferences as fixed. Hence, the deliberative aspect

of decision-making is excluded from these models by a methodological fiat. Indeed, a substantive part of the philosophical discussion on deliberative democracy can be read as an attempt to cope with the problems arising from the Rikerian interpretation of the social choice results (Bohman 1990; Cohen, 1989, 28; Dryzek, 2000, 31–50; Dryzek & List, 2003; Elster, 1986; Ferejohn, 2000; Ingram, 1995, 229–236; Miller, 1992). This aspect of the deliberative theorizing is directly relevant to our present concerns. But the deliberative conception of democracy also has its own appeals. It is symptomatic that the two most influential political philosophers of the late twentieth century—John Rawls among the analytical philosophers, Jürgen Habermas among the Critical Theorists—have identified themselves as deliberative democrats.

Some influential interpretations of the social choice results seem to pose a problem to both the "liberal" and the "populist" theories of democracy. If democratic decision-making would necessarily be an arbitrary process of aggregating pre-determined preferences and vulnerable to ambiguity and manipulation, how could its results be conceived as legitimate? To quote Benhabib (1994, 29):

> A mere aggregation of majority preferences could not claim legitimacy because the basis on which the preferences of the minority were discounted could not be stated; neither could such a procedure claim rationality because no grounds could be given as to why the aggregation of majority preferences would result in a better and more enlightened decision than conclusion reached by some other procedure.

However, if we can show that democratic practices either are not just means to aggregate *pre-given* interests, or if at least they could be made to work in a different way, there is some hope that the problems of legitimacy could be solved. Thus, the contrast between *aggregative* and *deliberative* conceptions of democracy is a common starting point for most deliberative theorists (Elster, 1986; Ferejohn, 2000, 82–87; Gutmann & Thompson, 1999, 13–20; Miller, 1992, 55). The supposed contrast prevails between rational deliberation and aggregation of majority preferences; as we have seen, a somewhat similar contrast was already present in medieval and early modern political theory, exemplified by the quotation from Lawson (see Sect. 2.1.3).

What are the benefits of deliberation as compared to those of aggregation? There is a certain ambiguity present in many discussions on the merits and demerits of "aggregative" and "deliberative" conceptions of decision-making. For example, Gutmann and Thompson (1999, 13–20) speak about aggregative and deliberative "methods". An example of an aggregative method is "majoritarianism":

> The most common version of this method is to let the representatives of the people to make the decision, again by majority vote, or some similar rule, in the legislature. The representatives themselves are chosen in elections, which are viewed as "competitive struggle[s] for the people's vote". The electoral process is modelled on the analogy of the market. (p. 14)

Gutmann and Thompson focus the three defining aspects of modern democracy: representation, elections, and majority rule. What, however, they are actually criticizing is not particular methods of decision-making but rather the way these methods are "viewed" or "modelled" in political theories. Gutmann and Thompson

do not want to abolish voting or representation but to give them a new interpretation. Some other proponents of deliberative democracy seem to think that deliberative discussion could, at least in principle, *replace* voting and other "aggregative" methods of decision making. I think that Russell Hardin is right in his critical comment: deliberation informs decisions but is not a procedure for making decisions. However, if an "aggregative" stage is unavoidable in most decision-making, how are the two stages related? Does the deliberative interpretation of democracy have any concrete institutional implications concerning representation, voting, or elections? The central challenge of the new deliberative theories is to show that they have something new to offer, that they are not simply re-stating the thousand years' old dilemma of qualitative *vs*. procedural reason, counting vs. weighing (Sect. 2.1.1).

5.5.7   *Rational Consensus as an Ideal*

The first wave of the new deliberative theories, mostly inspired by the work of Jürgen Habermas, accepted the old ideal of unanimity (Sect. 2.1.1) as a condition for legitimacy.[32] However, the idea of unanimity or consensus has a complex role in these theories. It cannot be reduced to the traditional idea of consensus as universal consent. Consensus is not conceived as a source of legitimacy because it results from an exercise of citizens' free will, or because it is "the surest visible sign of general utility" (to quote Bentham), but because it is the ideal outcome of a common, rational search of *truth*.[33] The Habermassian *ideal discourse* is conducted under the rules of rational discussion. Each subject is allowed (1) to participate in discourse; (2) to call into question any proposal; (3) to introduce any proposal; (4) to express attitudes, wishes and needs. Moreover, (5) no speaker is to be hindered by compulsion, (6) the acceptance of a proposal is based only on the force of the best argument and (7) the outcomes, as well as reasons supporting them, are universally agreed. Other deliberative theorists suggest similar lists (Benhabib, 1994, 31; Cohen, 1989, 22–23; Postema, 1995, 356–360).

How is rational discussion is supposed to solve the problem of disagreement in an ideal world? In a simplified form, the answer is this: In the real world as we know it, discussion is almost always limited by ideological distortions, particular interests, social inequality, and even by a naked repression of opinions. In an ideal world

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[32] An important exception to this is Bernard Manin's pioneering article 'On Legitimacy and Political Deliberation' (1987). Manin explicitly rejects the Habermassian consensus-oriented view of democracy.

[33] The autonomy-based justification of consensual decision making is typically used by Kantian libertarians, like R. P. Wolff (1970/1976), while the interest-based justification is central for Paretian economists like James Buchanan. However, Buchanan does, at least sometimes, accept an epistemic interpretation of consensus not dissimilar to that supposed by Habermas: "Truth, in the final analysis, is tested by agreement. And if men disagree there is no truth." (Buchanan, cited after Norman Barry, 1984, 80).

governed by the rules of communicative rationality (1)–(6), participants in discussion would have only a single aim, to find a rational solution to their practical and theoretical problems. Hence, they would use only the force of argument, and accept statements and policy prescriptions only for rational reasons. Their rationality would filter out ideological distortions as well as claims based on personal or group egoism. It would eliminate strategic behaviour, or at least diminish its role. It would also eliminate the effects of all forms of power, except that of the "best argument".

The Habermassian supposition is that ideally rational individuals, discussing in an ideal communication situation, would reach a rational agreement on any given issue. Moreover, Habermas and his followers argue that this is not merely a Utopian ideal. As sincere participants in discussion, we have all implicitly accepted the norms of communicative rationality (1)–(6) and the commitment to the search for a rational consensus. Even if in our everyday disputes we violate these requirements, they are binding nevertheless. *Communication as such* presupposes the validity of certain rules, including the rules of discourse listed above. According to the argument, the practice of rational justification is a part of the general practice of discussion. Suppose that someone wants to challenge the Habermassian view that we are committed to the search of a rational, un-coerced consensus through argumentation. If the critic is sincere, she has to put forth arguments she finds convincing, hoping that the others would accept them too. If she is engaged in serious discussion, she cannot be content with an assent based on lying, misunderstandings, flattery, blind conformism, coercion, bribery, or sheer exhaustion. She *wants* to win the assent of the others solely through the force of the best argument. In other words, when arguing *against* the ideal of rational agreement, the critic is necessarily *aiming at* such an agreement.[34] As Bernsen ([1982], 238) says, if rational discussion is defined as a goal-directed search for truth through communication with others, it does not seem possible to raise serious doubts about the concept without simultaneously presupposing it. To raise serious doubts *is* to engage in the search of truth by means of communication. Such a search has to be regulated by some rules, however general or vague. Without any inter-subjectively valid rules or standards, there would be no criteria for success or failure of the search. In this sense, a discussion is like a game: it is possible to "win" a game by cheating, but "winning" by cheating is conceptually parasitic to honest playing and presupposes criteria for a fair success. And, while one may refuse to play any ordinary game, it

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[34] Rescher ([1993], 152) challenges Habermas' idea that discussion is agreement-oriented. He argues that "the primary objects of communication" are (1) extending one's own information and (2) solidifying one's information by testing it against the information available from others. But this view is curiously one-sided and self-centered; there is no reference to the (self-interested, altruistic, or impartially motivated) aim of extending the information of *others*. I do not, for example, believe that Rescher himself wrote his book just in order to get it reviewed and commented upon; but even if he actually did that, the *stated* purpose of the book was, nevertheless, to enlighten and persuade its readers.

seems to be impossible to quit the "game" of discussion and argumentation while remaining a member of a political society.

In an ideal communication community, the members would discuss until a full consensus were reached. As in the medieval and early modern views on collective decision making, in this view the majority decisions are seen as *imperfections* of the decision-process. For Benjamin Barber (1984, 198), "majoritarianism is a tribute to the failure of democracy: to our inability to create a politics of mutualism that can overcome private interests". Elster (1986, 112) concludes that in a Habermassian ideal community "there would not be any need for an aggregating mechanism, since a rational discussion would tend to produce unanimous preferences". This sounds rather Utopian. Realistically consensus or unanimity can only work as a *regulative ideal* in the Kantian sense of the term. A regulative ideal has two functions. First, it guides practical action: the procedures and practices governing real discussion may *approximate* the ideally rational procedures more or less closely (Freeman, 2000, 379; Postema, 1995, 360). As Cohen (1989, 26) says "The ideal deliberative procedure provides a model for institutions, a model that they should mirror, so far as possible". Second, a regulative ideal provides reasons for the criticism of actual practices; according to Dryzek (1990, 57) "Any individual communication, collective decision, or social practice that could only by justified by diverging from the precepts of ideal speech is indefensible". The fundamental question is not whether the conditions of ideal communication can be realized (they cannot) but whether they can meaningfully be approximated. The idea of an "approximation" of an unattainable ideal creates problems of its own. One problem is that "best approximation" presupposes a measure of betterness or closeness; without such a measure it would be impossible to judge whether one institution or decision lies closer to the ideal than another. If the ideal is a complex one, to be described only in terms of a conjunction of several requirements, its different aspects have somehow to be weighed. Otherwise we may end up with a version of the Condorcet paradox in which arrangement A is closer to the ideal than arrangement B in one sense, B is closer than C in another sense, but C is closer than A in a third sense.

Before confronting these difficulties it is, however, necessary to say something about the justificatory role of consensus in the theory. Most deliberative theories are versions of the epistemic view discussed above (Freeman, 2000, 384–389). For example in the Habermassian view, ideally rational reasoners, when confronted with the same evidence and the same arguments, are, at the end of the day, bound to agree *both* on facts and on values. Further, as Habermas (1996, 166) says, while people can agree to a compromise for different reasons, the consensus brought about through argumentation must rest on identical reasons that are able to convince parties in the same way. The ideal consensus is a consensus on premises *and* on conclusions. Therefore, in ideal conditions, an agreement can be taken as a reliable sign of truth. This kind of theory has its obvious appeals. It possesses the charming simplicity of all great rationalistic programmes. Moreover, it seems to show a way out from Rousseau's dilemma: If the common good were simply what a majority happens to want, we would be at the mercy of changing majorities; if it were something else, the spectre of epistemically justified elitism would raise its

head. The supposed third alternative is that the common good is what people could accept in ideal conditions. However, the implications for democratic theory are far from clear. Is the consensus or convergence of opinions supposed to have an *indicative* or a *constitutive* role? Is the truth or validity of norms we are deliberating on an independent "thing" (as it is for Rousseau and in versions based on the Jury Theorem)? Or, rather, is it constructed in the very process of deliberation?

Some theorists of deliberative democracy, including Habermas—at least in some of his texts—have opted for the latter solution. According to them, the basis of the validity of norms is not found in the external world; it is a product of the consensus-oriented deliberative process itself (Cohen, 1989, 29; for critical comments, see Christiano, 1996, 35; Freeman, 2000, 391–393; Gaus, 1997). Like democratic relativism, the constitutive interpretation of the deliberative theory is circular. Suppose that we all become supporters of the above-described view. Then, we will believe that a norm or a sentence is true or valid if and only if we can reach a rational consensus, based on common argumentation and deliberation, that it is true or valid. What, then, are we supposed to argue and deliberate about? What claims or statements may we rationally bring into the process if we are already aware that we have no rational reason to accept a claim or statement unless it is a product of the very process? How can I sincerely claim (and defend my claim) that *x* is required by the common good if I know that its being required by the common good is not independent of the general acceptance of my claim? No similar problem arises if a reasoned agreement is regarded as a fallible indicator of an independent truth rather than as a criterion of truth. However, the problems which troubled other epistemic theories of democracy (for example, those of Rousseau and Condorcet) raise their heads.

Additionally, the epistemic version of the deliberative theory has also problems of its own, and these further problems are related to the strongly idealized nature of the Habermassian model. An agreement can be taken as a reliable indication of truth, at least in the ideal conditions, if and only if ideally rational reasoners are bound to reach an agreement, sooner or later. (The idea that ideally rational reasoners are bound to agree is shared by people as diverse as Habermas, and Rawls—when discussing the Original Position in *A Theory of Justice*—and the game theorists.) However, if we accept this view, it is not clear why the consensual ideal community could not be replaced by the ideal of a single super-rational reasoner. Why could the supposed convergence towards the truth not take place in a single ideal mind? Is the model still "non-monological" in some deeper sense? Of course, the idea of such a super-mind is incompatible with our finite nature—but so is the idea of a community of ideally rational reasoners. Our *separateness*, the fact that we are different individuals, makes it possible for us to acquire differing perspectives, and therefore to contribute to the common discussion. This was the fundamental point made by Aristotle in his defence of the wisdom of the Many. But the same separateness may also make disagreements unavoidable. Disagreements are as much a part of the human condition as our shared rationality. Nicholas Rescher (1993, 11) gives an illuminative list of the possible sources of disagreement among rational persons: the diversity in experiences and epistemic situations,

the variation of "available data", an under-determination of facts by data, the variability of such cognitive values as security, simplicity etc., and variation in cognitive methodologies. Can "rational discourse" iron out all such differences? Of course, all depends on the description of the ideal situation. A *sufficiently* idealized description of discourse abstracts away most aspects of our separate existence. For example, Robert Alexy (quoted after Tschentscher, 2004, 74) characterizes "ideal discourse" as a dialogue "under the conditions of *infinite time*, unlimited participation and complete absence of coercion (. . .), full empirical information, perfect ability and willingness to switch roles as well as complete absence of prejudice". Similarly, according to Nino (1996, 118), democracy can "be defined as a process of moral discussion *with a time limit*".

An idealization is, by definition, a counter-factual description. In other words, it is necessarily untrue. Nevertheless, it is possible to distinguish between better and worse idealizations; all idealizations are untrue, but some of them are also implausible and non-illuminative. In the last quotations, taken from Alexy and Nino, I have emphasized the phrases "infinite time" and "time limit". We may concede that our disagreements are, indeed, likely to disappear if there is literally *no* time limit for deliberation. Although the Habermassian consensus model is very unlike the Paretian unanimity models formulated by the constitutional economists like James Buchanan and Gordon Tullock (1962; see Sect. 5.1.2), these models have at least one thing in common. In the Paretian models, consensus or unanimity is the ideal when transaction costs can be ignored. Only the imperfections of the world, the costs related to the negotiations needed to reach unanimous decisions, makes closure rules such as the majority principle rational. In the ideal worlds of constitutional economists, as well as in those imagined by deliberative theorists, there are no urgent needs to be satisfied, no threatening prospects which require immediate action, no dangerous ongoing processes to be controlled. "Compulsion" is absent, not only in the sense that the participants do not try to compel each other, but also in the sense that circumstances themselves do not compel the participants. In such a world, the temporal dimension can be ignored because discussion and negotiations have no costs. But then, the situation in which those who are reasoning find themselves is not a *practical* decision-situation. *If there is no time limit for deliberations, there is no real need to make any binding decisions at all*. This supposition makes the models deeply a-political. If there is no need to make binding decisions, there is no politics. In real life political decision-making we might, perhaps, try to approximate a situation where participation is literally universal or where all forms of manipulation are abolished. But we cannot even approximate a practical decision-making situation in which there is no time aspect, for it is not a practical decision-situation. The timeless model reflects the nature of theoretical rather than of practical discussion.[35]

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[35] As Sir James Fitzjames Stephen (1874, 5) remarked: "There is a great deal to be said for an Established Church, and a great deal to be said against it; and if its advocates and antagonists were left to convince each other by mere force of argument, they would wrangle until the end of time".

Those who try to find an epistemic foundation for democracy are often tempted to present a strong analogy between scientific communities and democratic communities—an analogy shared by authors as diverse as Dewey, Habermas, and Popper. In the search for theoretical truth, the convergence of beliefs within a community of rational truth-seekers is seen as one sign of truth. In realistic epistemology (in Peirce, for example), this convergence of opinions in scientific praxis is explained as a convergence towards a more accurate description of an independently existing reality. However, if opinions do *not* converge within a given time period, there is always an option open for us: we may suspend judgment and remain agnostics until we obtain new evidence (which may not be forthcoming in any foreseeable future). Here is one important difference between practical and theoretical discussions. On purely theoretical matters, we usually have the possibility to suspend judgment, while in practical decision-making situations we cannot leave matters undecided. In practical matters, the "logic of acceptance" is two-valued: inaction is a form of action, and "non-decisions" are decisions in the morally relevant sense.[36] If the question of a possible greenhouse effect were a purely theoretical question, it could be postponed. But it is also a very important practical question. Therefore, we have to make the decisions, and take the risk that they are not, in the long run, in accordance with the common good. In politics, there is the "Hobbesian" necessity of having a final and supreme way of making binding decisions within a limited (sometimes very limited!) time period. There is no analogous need in other truth-searching communities. Yet another way of putting the same issue is this: under the unanimity or consensus rule, at least one outcome has to be imposed non-unanimously. As long as there is no consensus, the *status quo ante* or some other privileged state of affairs must prevail, even when opposed by almost all decision-makers (Rae, 1975). It is a mistake to characterize consensual decision-making as *inherently* less coercive than majoritarian decision-making.

5.5.8   *Deliberative Theories and the Majority Principle*

In practical contexts, the existence of a time-limit forces a closure, but it does not force us to accept any particular rule for that purpose. For example, if we continue to use the science analogy, we have to notice that although scientific communities are committed—in theory if not always in practice—to the ideal of free communication, they are not committed to internal equality. Scientific controversies are not

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[36] The notion of "non-decision", a potentially relevant issue that is ignored in decision-making, was introduced by Bacrach and Baratz in their classical article (1963). As a descriptive tool of political science, the notion has its problems (how do we define issues that are "potentially relevant"?), but in normative discussions it certainly has its merits. If decision-makers have (i) the power, (ii) an opportunity, and (iii) a reason to make an explicit decision in certain issue but they nevertheless ignores it, we may well say that they actually make a "non-decision" in favour of the *status quo*.

resolved through ballots. Now, the problem of the multi-dimensional nature of the deliberative ideal becomes relevant. If decision-making is modelled as a truth-seeking process, why should we suppose that in the absence of a rational and universal consensus, a less than fully rational *majority* consensus is the best "approximation" of a rational agreement in practical issues? Why is the closest approximation of the ideal not, for example, a rational consensus among only those who are wise and well-informed? As Seyla Benhabib said, some ground has to be given to explain why the aggregation of majority preferences would result a better and more enlightened decision than conclusion reached by some other procedure. Habermas agrees: he argues that majority role must have "an internal relation to the search of truth" (1996, 475).

Cristina Lafont (2006, 18) admits that providing a deliberative interpretation of majority rule is perhaps the hardest task of a defence of the deliberative ideal. This is not a minor issue, if one accepts the claim (made frequently in this work) that the use of the majority rule *is* central in real-life democracies. According to Lafont, an adequate defence has to be given in epistemic terms: if a minority gives its assent to majoritarian outcomes "for procedural reasons *that are unrelated to any epistemic features of the democratic process*, the deliberative model makes no essential contribution to a theory of democracy" (p. 18, emphasis in original). To see the severity of the challenge, consider the following theses: consensus is the ideal form of decision-making, it is ideal specifically for *epistemic* reasons but in practice it is unattainable and has to be replaced by the majority principle, while the majority rule is just a convenient device, without any epistemic virtues. The last thesis simply cuts off the connection between epistemic reasons and decision-making supposed in the earlier theses. Consequently, many deliberative democrats have tried also to defend majority decisions in epistemic terms. In other words, they have argued that although majority decisions fall short of full consensus, they tend to be "better and more enlightened" than conclusions reached by other procedures (including an agreement among the wise). This provides reasons for minorities to accept the legitimacy of majority rule. According to Benhabib:

> in many instances the majority rule is a fair and rational decision procedure, not because legitimacy resides in numbers but because if a majority of people are convinced at one point on the basis of reasons formulated as closely as possible as a result of a process of discursive deliberation that conclusion A is the right thing to do, then this conclusion remains valid until challenged by good reasons by some other group. It is not the sheer numbers that support the rationality of the conclusion, but the presumption that if a large number of people see certain matters in a certain way as result of following certain kinds of rational procedures of deliberation and decision-making, then such a conclusion has a presumptive claim to being rational until shown to be otherwise.

Similarly Habermas defends the presumptive acceptability of majority decisions for epistemic reasons:

> Majority rule retains an internal relation to the search for truth inasmuch as the decision reached by a majority only represents a caesura in an ongoing discussion; the decision records, so to speak, the interim result of a discursive opinion-forming process. (Habermas, 1996, 179; cf. also Manin, 1987, 354)

Thus, Benhabib and Habermas acknowledge the "Hobbesian" necessity to make a binding decision within a limited time period. They defend majority decisions as the epistemically second-best option when a full consensus is not attainable. This is coupled with the idea that because majority decisions are less than fully rational, their validity is also a limited one. Both Benhabib and Habermas emphasize the *provisional* nature of majority decisions (cf. also Gutmann & Thompson, 2004, 6–7, 110–119; Postema, 1995, 271–272).[37]

At this stage of the argument, the problem shared by all epistemic theories of democracy reappears. On one hand, if the majority principle is supposed to share most of the epistemic virtues possessed by a rational consensus, the role of a persistent opposition is inexplicable after the decision has been made (Sect. 5.5.5). If, on the other hand, there is only a *weak* epistemic presumption for the majority opinion, it is not clear whether such a presumption is, nevertheless, sufficient to justify majority rule *vis-à-vis* its potential competitors (Christiano, 1997; Engländer, 2000, 245–248). Now, we saw that the relation between a reasoned consensus and the validity of a decision may be understood in two different ways. If the validity of the decision is constituted by a unanimous agreement, a majority decision cannot be said to have any "presumptive" validity which binds those who have not yet agreed. If, however, the validity of a decision or a norm is an independent fact and the agreement is only an indication of this validity, a separate argument is needed to show that, wanting a full consensus, a majority decision is the next-best indicator of validity. Here the deliberative formula remains ambiguous in the same way as the old *major et sanior pars* formula. If there is no consensus, somebody has to submit. Why should it be the minor rather than the less reasonable part? Benhabib claims that "sheer numbers" do not "support the rationality of the conclusion". But the *very meaning* of the majority rule is that "sheer numbers" do matter: "*solum numeri ad numerum fiat collatio*". It is not enough that "a large number of people see certain matter in a certain way" as Benhabib says; the necessary and sufficient condition is that it is strictly the *largest* number. Under one reading, Benhabib and Habermas seem to argue that a majority decision somehow *predicts* the likely result of a reasoned consensus. Benhabib and Habermas could say that a majority decision can predict the content of the agreement only if it is reached through a process which is sufficiently close to the deliberative ideal. But this reply is insufficient. A real decision-making process is bound to diverge from the ideal process in various ways and at various degrees. The decision-makers are likely to disagree on whether a particular process leading to majority decision is sufficiently close to the ideal to validate the decision. If the decision-makers disagree on the issues, they are also

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[37] The difference between the Hobbesian "finality" and the "provisionality" emphasized by the deliberative theorists is partly a matter of perspective. *Within a given time period*, political decisions are "final"; within a longer period, they may be "provisional". "Irreversible" decisions cause a special problem for Habermas, for he tends to think that they should be decided by special majorities. The difficulty is that in some cases, *all* decision alternatives (including doing nothing) may have irreversible effects.

likely to disagree on, for example, whether the principle of the strongest argument has been respected in the discussion.

   The justification of the majority principle provided by Carlos Santiago Nino (1991, 1996) is similar although more detailed than those given by Benhabib and Habermas. Nino argues that moral discussion is not only a method of acquiring moral knowledge but also a practical procedure for solving conflicts; it is a social practice oriented to achieve unanimous consensus on principles. Thus, in the practice of moral discussion we try to reproduce the conditions for reaching an ideal consensus (Nino, 1991, 43). However, if a unanimous consensus is not achieved, but nevertheless, a decision has to be made, the simple majority principle is to be preferred because it is "the decision procedure which is closest to unanimous consensus" (p. 44). Nino argues that majoritarian decision-making "has greater epistemic power for providing access to morally correct decisions than any other collective decision-making procedure" (Nino, 1996, 119). According to him, this solves the problem of legitimacy, for democratically enacted laws provide epistemic reasons for believing that there are moral reasons for acting as the laws prescribe (p. 135). Again, the problem of approximation becomes relevant. Why does Nino think that when unanimity fails, the simple majority rule must be the second best alternative? Why is it better than, for example, a supermajority rule, or a consensus (or majority) of the enlightened?[38] He argues that the majority principle "requires us to convince as many people as possible" (p. 126), but a supermajority rule requires even more convincing, if our aim is to overturn the *status quo*. Nino combines his defence of deliberative practices with an appeal to Condorcet's Jury Theorem (1991, 46; 1996, 127).[39] But, as we have seen, the applicability of the Theorem in the conditions of modern democracies is troubled by several problems.

   Cristina Lafont (2006, 18–20) provides a slightly different interpretation for the "presumptive validity" of majority decisions. According to her, majoritarian decisions can be interpreted as indicators of where *the onus of argument* lies at the particular moment of the deliberative process. Now, the notion of the onus of argument is a complex one. In theoretical discussion, the onus of proof is determined by the dialectical situation: for example, a participant who brings new claims to the discussion is said to have the onus of proof. She has the burden of showing that the claims she makes are supported by reasons. After that, the burden lies on those who want to challenge her claim. In contrast, in many practical contexts the onus of proof is partly determined by normative reasons unrelated to the task of searching for the truth. In a court trial, for example, the prosecuting side has the onus of proof: they have to show that the accused is guilty. (In the American jury system, the prosecutor has to convince all the members of the jury.) When new drugs or chemical products are accepted for sale, their manufacturer has the onus of

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[38] Tännsjö's theory was troubled with the same ambiguity; cf. footnote 15 above.

[39] Similarily, Marti (2006) argues that deliberation is likely to increase the applicability of Condorcet's Jury Theorem by eliminating systematic biases which would have an effect on their epistemic competence.

proof of showing that they are *not* dangerous. In these cases, the burden is not dependent on epistemic reasons, but on norms which prescribe that it is morally better to err in one direction than to another. If, as Lafont claims, majority rule can be interpreted as an onus of proof rule, this role of the rule might still be explained by non-epistemic normative considerations as in the trial case.

Using an argument somewhat similar to that put forth by Buchanan and Tullock (1962), Gerald Gaus (2008) claims that theory of deliberative democracy actually supports the use of *qualified* majority rules rather than the simple majority-principle. Suppose that the task of voting is, in a sense, to predict what would be accepted unanimously in a discussion which had no time limit. Gaus argues that there are two desiderata for a voting rule. It should avoid false positives; that is, rules which have gained some support but cannot be rationally endorsed by all citizens. It should also avoid false negatives; that is, it should not reject rules which could, at the end of the day, be acceptable to all, but which are, at the moment of voting, erroneously rejected by some citizens. According to Gaus, the first risk diminishes when the decision-rule becomes more inclusive but, at the same time, the second risk increases. Gaus argues that the optimal point is likely to be beyond the midpoint (N/2), say, two-thirds or three-fourths. However, qualified majority rules are non-neutral, favouring the *status quo* or, if they are neutral, they are bound to be non-decisive (see Sect. 2.2.1). Unlike free-market liberals (for example, Buchanan, Tullock, and Riker), the deliberative democrats cannot accept non-neutral rules. For rules which favour the *status quo* are built on the presupposition that some important issues (say, the nature of property rights) have already been settled before the deliberation process starts. If the deliberative democrats are committed to both qualified majority rules and neutrality, they have to accept non-decisive rules: sometimes, no alternative wins the support of a qualified majority. Actually, this is plausible. Even if a temporarily unlimited process of deliberation would always lead to one single solution, there is no reason to suppose that with a time-limit there *must* be one single alternative vindicated by the process (Gaus, 2008, 29–30). But then the theorists of deliberation are back to square one. The deliberative process does not tell us how to choose when the time is out and the disagreement still persists.

Simone Chambers (1995, 1996) is probably the most convincing of all democratic theorists of the Habermassian persuasion. She admits, quite openly, that there exists a strong tension between the model of ideal consensus and the realities of political decision-making. Habermas's ideal discourse is constraint-free: no-one has a right to force closure, and the conversation goes on until there is a full consensus. As Chambers says, the larger and more diverse the group, the more difficult it is to achieve this aim (Chambers, 1995, 248). Moreover, "the more the parties of a discourse are constrained by the need to make a concrete decision, the less motivated they will be to act discursively and the more motivated to act strategically". The important fact, recognized by Chambers, is that both the need to make binding decisions in finite time and the nature of the chosen closure-rule cast their shadows over preceding deliberations. If people are aware of the time limit and of the necessity of closing the discussion by taking a vote, this awareness

is likely to affect the deliberative process. Hence, Chambers admits the existence of a general trade-off: "the closer our conversations come to embodying the ideal, the more inefficient they are" (p. 250). This result is rather serious for a theory which is supposed to set a *regulative ideal* for practical politics. For the need to make decisions in an effective way is at least as central for politics as deliberation; many would say that it is actually more central. This leads back to my earlier point: An unconstrained discussion which can be terminated only by a free consensus is not a highly idealized form of a political decision-making process; *it is not a decision-making process at all.*[40] Thus, it is not meaningful to ask whether a particular real-life decision-making process approximates it more closely than another process; for example, to ask whether a majoritarian process is *closer* to the ideal than a process based on actual unanimity. Chambers acknowledges the fundamental fact:

> [D]iscourse is a long-term consensus-forming process and not a decision procedure. (...)
> Discourses potentially underpin and justify institutional democratic arrangements; they are
> not an alternative to such arrangements. (Chambers, 1995, 250)

All contemporary deliberative theorists are convinced democrats. Benhabib, Habermas, Nino, Lafont, and Chambers firmly accept the two components of democratic equality: the principle of maximal inclusion and the principle of equal participation. My only point is that these components do not themselves follow from the epistemic deliberative ideal. Rather, the supporters of deliberative democracy are forced to appeal directly to the *procedural fairness* or *egalitarian* nature of democratic institutions (Christiano, 1997, 274; Ingram, 1993, 302; Postema, 1995, 372; Rehg, 1998). Fairness or equality of a procedure has nothing as such to do with the epistemic value of the outcomes reached through that procedure. Deliberative democrats may agree that majority decisions are more legitimate than a consensual decisions made by the *sanior pars*, not because all citizens are equally wise, but because there is no independent way to define the wiser part that could be justified for all reasonable members of the community. Even if an elite group of moral experts existed, their power would be legitimate only if even the less sophisticated citizens could accept it (Estlund, 1993). But, by making such a requirement of general justification conclusive, the deliberative theorists have *already* presupposed one version of the principle of (formal) political equality. Only a supporter of political equality would require that power inequalities should be acceptable to all. Thus, there is a dilemma for the deliberative theorist. On the one hand, if political equality is accepted as fundamental, epistemic considerations have no role in the justification of the decision-principle. Then, according to Lafont,

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[40] Raf Geenens (2007, 360) illustrates this with the following example "The forced logic of the (...) epistemic view becomes more apparent once we remember that voting procedures are not only employed within parliamentary bodies and courtroom juries, but are routinely used in the elections of office. (...) A politician is not democratically appointed representative because there is a presumption that he is the best or the most competent candidate (one can easily imagine better procedures if that were the goal)."

deliberative theories do not actually make a contribution to the democratic theory. On the other hand, if deliberative democrats take the epistemic requirement as the basic one, the use of majority rule remains unjustified.

There is a lot to be said for the traditional epistemic conception of decision-making. Of course, we want the decisions which bind us to be based on the best possible information and the most careful weighing of evidence. In *individual* decision-making, these requirements, rather than the use of some mechanically applicable rule, are the constitutive conditions of rationality. It is not difficult to understand why people are constantly looking for some collective version of individual rationality. The problem is that qualitative requirements cannot be fully institutionalized in collective decision-making. They cannot be incorporated into a decision-rule. If, after the weighing of the arguments, a disagreement still prevails, the alternatives are the authoritative fiat of some higher instance (which, unless it is a dictatorship of one person, may in its turn face the same problem of disagreement), and some purely mechanical rule of aggregation. In Sects. 2.1.1–2.1.4 the history of collective decision-rules was described as a continuous attempt to circumvent the difficulty. The modern attempts to justify majority rule—or unanimity, for that matter—by appealing to epistemic considerations can be seen to be continuations of the old theme. Ultimately, they are doomed to repeat the same difficulty. There are, I think, good (Aristotelian) epistemic reasons to prefer the regime of the Many to that of the One. There are also good (Millian) epistemic reasons for freedom of discussion. But the two core principles of democratic equality—the principle maximal inclusiveness and of equal power—cannot be derived from these considerations. This does not mean that deliberation and considered judgment are irrelevant for democracy—only that they have more to do with elusive notion of "political culture" than with institutional decision-rules.

5.6 Pettit's Challenge

5.6.1 Pettit on Deliberation and Judgment Aggregation

While Riker tried to derive philosophically and politically relevant conclusions from the classical results of the theory of social choice, Philip Pettit does something similar with the judgment aggregation results (Sect. 4.1.2). However, Pettit's political theory is, unlike that of Riker, based on careful and historically informed philosophical reflection (Pettit, 2001, 2003, 2004a, 2004b, 2006, 2009). His background theories are, on one hand, a version of classical ('Roman') republicanism, and, on the other, the recent theories of deliberative democracy. According to Pettit, the problem of democracy is created by three constraints shared by all versions of the deliberative-democratic ideal (Pettit 2001, 270):

1. *The inclusive constraint:* all members are equally entitled to participate to decision-making by voting, and something less than a unanimous vote is sufficient to determine the outcomes.

2. *The judgmental constraint:* before voting, members should deliberate on basis of considerations as to what is in the common interest.
3. *The dialogical constraint:* the deliberation should be conducted in an open and unforced dialogue.

As we have seen, deliberative theorists cannot avoid the inclusive constraint (1); it is shared by all theorists of democracy. The two other constraints define the deliberative approach and distinguish it from other approaches. The judgmental constraint (2) requires voters to vote in a reflective manner, and it also requires them to base their choices on considerations related to the "common interest". Decisions are interpreted as common judgments rather than simply as collective choices. The dialogical constraint (3) specifically "rules out the sort of plebiscitarian dispensation in which each participant privately forms his or her judgment about common perceived interests, rather than doing so in dialogue with others" (Pettit 2001, 271).

While subscribing to the deliberative ideal, Pettit argues that it is seriously underspecified. Once the necessity of the majority principle is accepted, it has to be specified at which level of the process vote is taken. This choice has important consequences for the outcomes. Let us recall (one version of) the judgment-aggregation paradox presented in Sect 4.1.2. Suppose that a body of three members (A, B, C) has to answer to three questions: should the social services be increased or not (the first question), if they are to be increased, should this increase be financed by rising taxes (second question), or should it be financed by budget cuts (third question); let us suppose that there are no other ways to finance the resulting deficit. The members/groups $(A, B,$ and $C)$ answer the three questions in the following way:

Example 5.2

Member	More social services?	More taxes?	Budget cuts?
A	Y	N	Y
B	N	N	N
C	Y	Y	N
Majority	Y	N	N

The body, taken as a collective, accepts the increase of social services but rejects all means to finance them. This combination of judgments may be called "paradoxical" or "inconsistent"; nevertheless all the judgments made by *individual members* are internally consistent. From the impossibility results we have learned that there is no way to guarantee that collective consistency and democratic responsiveness as embodied in the majority rule would always be compatible. Even if deliberative democracy could overcome the problem of preference cycles, it does not follow that it can similarly avoid the collective judgment problems. Collective judgment problems need not result from mutually incompatible (e.g. selfish) *interests*, rather they may arise from sincere evaluative and/or factual disagreements of *opinion*. Disagreements are inevitable even when the constraint (2) is satisfied; in other words, even when partial and narrowly egoistic motives are

not present. Judgmental inconsistencies may constitute a problem for the deliberative theories of democracy because—as we have seen—it is necessary to resort to aggregative devices like majority voting in order to solve disagreements within a limited time.

Judgmental consistency is a *diachronic* as well as a synchronic requirement. While a reduction of the number of options may make cyclical or inconsistent voting results less likely or even eliminate them, there seems to be no similar method to reduce the number of interconnected binary decisions rising during the life-time of a decision-making body. The number of issues, as well as their content and order, is partly exogenous: the issues have to be discussed and decided on when they arise. This would not constitute a problem if a decision-making body could just ignore its past judgments, treating them like the judgments of a different body. But, as Philip Pettit says, courts and democratic bodies are subjects of expectations of diachronic as well as synchronic consistency. They are expected to pursue policies consistently over time, and to keep their commitments to their members as well as to outsiders (Pettit, 2004b, 98). Pettit formulates this requirement as a further normative constraint:

> *The group-rationality constraint*: people should take steps to ensure that where their voting would lead to inconsistent or otherwise irrational policies, this is remedied and group rationality prevails.

For Pettit, this requirement of consistency has a deeper meaning. The group-rationality constraint follows from the general deliberative idea that all decisions should be justified by rational reasons. A necessary requirement of rational justification is that it is at least internally consistent. One may argue that this is a more plausible form of rationality than rationality-as-transitivity required by the standard interpretation of the social choice results.

Although the judgment aggregation problem is not reducible to the Arrovian problem, the conclusion to be drawn from both problems seems to be similar. One alleged consequence of the Arrovian results, emphasized by Riker and his followers is that rational democratic choices cannot be made in a fair way. The choices are bound to be arbitrary: either their outcomes are partly determined by institutional rules, or then there are undemocratic power concentrations. Again, Pettit says something similar. Both transitivity and internal consistency, individual as well as collective, diachronic as well as synchronic, are requirements of (institutional) practical rationality. When majority voting produces inconsistent or incomplete sets of judgments, collective rationality is sacrificed for the sake of democratic responsiveness. When inconsistencies are ruled out by constraining the operation of the simple majority rule, responsiveness is sacrificed for the sake of rationality (Pettit 2001, 274). As with Riker's view, there is an unavoidable trade-off.

However, for Pettit this trade-off is not a brick wall. Unlike Riker and his followers, he is not attracted by impossibilities as such. He insists that collective bodies *are* often able to act in a consistent and rational way, and when acting so, they are *not* usually seen as violating any rules of (democratic) fairness. In a sense,

Pettit is turning some of Riker's arguments upside down. Consider, again, Riker's argument (C):

(C) (1) Social choices should be based on the will of a majority revealed through a fair amalgamation of voters' values.
(2) In some cases (the cyclical cases) a fair amalgamation of voters' values does not reveal a unique will of a majority.
(3) In those cases, only some unfair (e.g. dictatorial) method leads to the formation of a unique will.

Ergo (4) Either we cannot make the social choice or it is based on an unfair method.

Pettit's argument could be interpreted as a reply in the form of a *modus tollens*:

(C′) (1′) Some collectives *are* able to make fair and meaningful social choices.
(2) In some cases (the cyclical cases) a fair amalgamation of voters' values does *not* reveal a unique will of a majority.

Ergo (3′) Social choice *should not* always be based on the will of a majority revealed through amalgamation of voters' values (*contra* (C)(1)).

Ergo (4′) Some methods *not* based on the will of a majority revealed by amalgamation of voters' values are fair (*contra* (C)(3)).

According to the modified premise (C′)(1′) of the argument, courts, committees etc. are actually able to make decisions which respect our intuitive demands of rationality and fairness. Because we *know* this, there has to be something wrong with the Rikerian argument (C). Nevertheless, the logical force of the social choice results is also undeniable, and the judgment aggregation theorems show that the basic problems are quite robust. *Contra* many proponents of deliberative democracy, the rejection of the preference interpretation of decision-making inputs and the adoption of the judgmental framework need not, as such, make the problems of social choice irrelevant as long as some "aggregation method" (for example, majority voting) is needed.

According to Pettit, the fundamental solution to the dilemma is the *acceptance of path-dependence in collective decision-making*. The fundamental insight of Christian List's work on path-independence (List 2004) is that, in judgment-aggregation, there are unavoidable trade-offs between different criteria. According to Pettit, the most fundamental trade-off is that between consistency, path-independence, and democratic responsiveness. If we want consistent (group-rational) decisions, we have to accept certain forms of path-dependence, thus limiting the range of democratic responsiveness. The price is acceptable if some decision-paths could be justified in terms of democracy. An outcome is justifiable if it results from a path which has an independent justification—even when the outcome is not, as such, supported by a majority of decision-makers. Fairness is preserved if the violations do not systematically favour any group decision-makers, and if these non-majoritarian aspects of procedures cannot be used for manipulative purposes.

5.6.2 Pettit on Representative Institutions

Pettit's view reverses the methodological and ontological implications of drawn by Riker and others. We have seen how, according to the widespread interpretation, Arrow's theorem shows that such "collectivistic" conceptions as the "will of the parliament", "the legislative intent" *etc*. are illegitimate. The judgment aggregation problem, in its turn, seems to show that the notion of a "collective judgment" is equally illegitimate. Judge Easterbrook's (1983) comment seems to be appropriate in both contexts:

> Because legislatures comprise many members, they do not have "intents" or "designs", hidden yet discoverable. Each member may or may not have a design. The body as a whole, however, has only outcomes (p. 98).

According to Pettit, however, collective bodies like legislatures *do* at least sometimes have intents, ends and goals. They *are* able to perform actions and make judgments. Because the social choice results are also undeniable, collective intents etc. cannot be reached by a mechanical aggregation process, for such processes need not obey the rationality requirements which, according to Pettit, are necessary for all ascriptions of intentionality. Therefore, the intents, goals and actions of organizations and other collectives are not simply results of aggregation. Rather, according to Pettit, *collectives may be said to have a "mind" of their own.* In a sense, collectives can sometimes be persons with a will of their own. This "will" is not reducible to the members' *present* individual intents and actions. There is nothing mysterious in Pettit's thesis. The "mind" of the collectives is essentially connected to the path-dependent nature of collective choices dictated by the institutional rules governing the decision-making of the collectives. Collectives are able to behave and choose in a purposeful way—in other words, they may be treated as agents—when, and as long as, the members actively try to collectivize their reasoning. A commitment to earlier decisions is an important example. Collectives may be bound by their earlier (substantive as well as procedural) commitments, and those commitments partly determine their subsequent choices. Thus, the possibility of collective or social rationality is essentially dependent on the internal organization of reasoning in decision-making bodies.

Like Arrow, Riker, Buchanan and the other social choice theorists, Pettit sees an essential connection between ontological, methodological and normative aspects of his analysis. He thinks that his view has important consequences for the design of democratic institutions. Path-dependence makes understandable how collective choices can be made according to "the will of the organization"—that is, they follow from the procedures and earlier commitments—rather than just reflecting the present opinions and preferences of the members. If Pettit is right, the strong responsiveness requirement is incompatible with the idea that the decisions should always be justified by coherent reasons. Path-dependence is incompatible with the Habermassian requirements that the participants are free "to call into question any proposal" and "to introduce any proposal". The "reversibility", "provisionality" and tentative nature of *all* majority decisions is emphasized by deliberative

democrats like Jürgen Habermas (1996) or Seyla Benhabib (1994) as an essential condition for legitimacy of the majority rule. Thus, for Benhabib "In the discursive justification and validation of truth claims *no moment is privileged as given, evidential structure which cannot be further questioned*" (1994, 5; my emphasis).[41] This seems to exclude all collective commitments as "premises"—except the general commitment to the rules of discursive justification itself.

The commitment to principled decision-making or "integrity" has, according to Pettit, definite institutional consequences. For only relatively small, internally organized groups are able to possess a "will", that is, to commit themselves to collectivized reasoning. Here it is useful to introduce Pettit's two notions of "control". According to him, democratic control may take the "authorial" or "editorial" forms. "Authorial" control is direct, active control exercised for example in referenda (Pettit favours the term "plebiscite"). "Editorial" control is virtual control, exercised in indirect elections and through courts and other mechanisms of appeal:

> It involves standing back when some other agency actively controls the process but assuming a disposition to amend what the active controller does, should the outcome not prove satisfactory. Such virtual control will occasionally be activated, in which case it ceases to be wholly virtual, but it constitutes a form of control, whether activated or not. By its very nature it will ensure that independent agents act appropriately. (Pettit, 2006, 302)

Because of the problem of collective inconsistency, a mass electorate is not able to exercise authorial control in a rational way. For large, anonymous groups are "too great in their number, too loose in organization, too changing in membership" (p. 307). For this reason "they must operate through representatives; democracy must assume a parliamentary rather than a plebiscitary form". Or, again,

> The natural line for deliberative democrats to take, if they favor rationality-first interpretation of their ideal, is to say that large-scale electorates should not be generally given policy-issues to resolve, in view of the likelihood of inconsistencies. Rather the remit of the people should be restricted to the choice of policy-making representatives, together with the associated discussion of the policy programs of candidates and their parties.(Pettit, 2004b, 98; cf. Pettit, 2003, 149)
>
> Let the populace be given charge of policy, as under a regime that allows of frequent referendums, and it is capable of ruling in the fashion of a capricious tyrant. There may be no consistency in the decisions it supports—and this, even if the individuals involved are wholly rational—and there will be little or no possibility of appealing against such failures of rationality. Power to the people, interpreted in this way, may mean power to a completely arbitrary force. (Pettit, 2004b, 104)

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[41] Here, discursive theorists seem to agree with the more traditional "populist" theories. Consider Rousseau: "Now the law of today must not be an act of the general will of yesterday, but that of today. We have engaged ourselves to do not what all *have* wished, but what they all *now* wish. For as the resolutions of the sovereign, as sovereign, regard only itself, it is always free to change them. From which it follows that, when law speaks in the name of the people, it is in the name of the people as it is now and not as it used to be. The laws, although received, only have lasting authority so long as the people, being free to revoke them, nevertheless does not do so." (*Geneva manuscripts*, Cole p. 293).

In Pettit's theory, the supremacy of the representative form of government is one practical consequence of the impossibility results. Moreover, representation cannot be "directed" or "delegated" authority. The judgment aggregation paradox shows that if the representatives are required to make consistent decisions, they cannot be controlled by their constituents on an issue-by-issue basis (Pettit, 2009, 75–76).[42] Representation must be "constructive" or "interpretive". The conclusion that the "people" cannot have an "authorial" control over democratic outcomes is incompatible with the populist ethos which animates some deliberative theorists; Habermas, for example, says that

> the modern legal order can draw its legitimacy only from the idea of self-determination: citizens should always be able to understand themselves also as *authors of the law* to which they are subject as addressees. (Habermas, 1996, 449; my emphasis)

Pettit analyses two possible ways of ensuring consistency of decisions in legislative contexts. In the "Westminster system"—characterized by single-members constituencies, a two-party system, disciplined parties, and parliamentary responsibility—the governing political party "will have to be well organized enough, on pain of electoral ridicule, to be able to ensure that it satisfies consistency and other such condition across the different laws and initiatives it supports" (Pettit 2006, 307–308). In the alternative "Washington system"—characterized by weak parties, a strong presence of local interests, separately elected executive, and a strong Supreme Court—the Congress "is subject to the discipline of being interpreted by the Supreme Court as if it were a rational centre of judgment and intention, and it has a reason therefore not to be so wayward as to give the Court unlimited, interpretative discretion" (308). These two models correspond to the two possible means of groups to "collectivize" their reasoning: "internal aspiration" and that of "being charged by an external authority" (Pettit 2001, 278–279).

In this analysis Pettit differs from Riker who sees the Westminster model (as described by Pettit) the prime example of populist majority tyranny (Riker, 1993, 147–148). Nevertheless, Pettit and Riker agree on that the outcomes of mass participation are likely to be "meaningless". According to Pettit, voters in general cannot "collectivize" reason. They do not form a group that has shared purposes or that can be held responsible for its collective actions. From this it follows that although legislative decisions may have a "meaning", elections results or mass plebiscites are "meaningless" in the sense that there is no collective intent or purpose behind them. Pettit's critique of "plebiscitary democracy" has a lot in common with Riker's critique of populism. Riker is worried about the cycles lurking behind individual decisions, Pettit about the compound effects of separate dichotomous decisions, but—as we have seen—they are basically one and same thing. Both theorists agree that besides elected representatives, we need independent agencies (for example, constitutional courts), because majoritarian democracy has an inherent tendency to produce inconsistent or meaningless results.

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[42] For less categorical version of the same argument, see Lagerspetz (2000).

Riker thinks that courts should treat all legislative decisions as equally meaningless; Pettit thinks that courts—at least in the Washington system—are forced to extract a meaning from possibly inconsistent legislative material in order to save collective rationality.

Although Riker's and Pettit's arguments run on somewhat parallel lines, there is an important difference. The (C)-problem is more likely to arise when there are numerous competing options, and the relevant actors are able to form complex and nuanced preferences. If we depart from the "impartial culture" supposition used in the standard probability calculations, the probability of voting cycles diminishes when the electorate increases (Goodin & List, 2001, 300–304; Tangian 2000). Similarly the problems resulting from strategic voting (D) are more likely to appear in small bodies in which decision-makers are more likely to know one anothers' preferences and to coordinate their strategies. In contrast, problems of judgment aggregation are more likely to arise when decision-makers face a series of yes-no questions and are unable to answer them in a coordinated way. This is the typical situation when the number of participants is large, as in a series of referenda. Again, we have to face a trade-off. If we are mainly worried about the traditional problem of preference cycles (and of the manufacturing of such cycles by strategic actors) we should, perhaps, be more favourable towards direct democratic mechanisms. If the inter-temporal coherence of judgments is our main worry, we should use indirect mechanisms which allow coordination and the "collectivization of reason" in internally disciplined representative bodies.

5.6.3   Critical Comments to Pettit

The Westminster system and the Washington system are, of course, only two possibilities among many. A third possibility, not analysed by Pettit is parliamentary multi-party government based on proportional representation. Ferejohn (2007, 125) speculates that Pettit would be likely to reject it, because the alternation of office and the lack of a single party control makes coherence less likely.[43] However, multiparty-systems have coherence-providing mechanisms of their own: majority coalitions are usually based on explicit agreements between parties.

Pettit's model preserves the core of the Habermassian ideal, according to which "the consensus brought about through argumentation must rest on identical reasons that are able to convince parties in the same way" (Habermas, 1996, 166). Perhaps the most interesting challenge to this deliberative view is made by Ottonelli (2010,

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[43] In an article on representation, Pettit (2009) subsumes proportional representation under the notion of "indicative representation". This is essentially the "microcosmic" conception of representation. Pettit makes an important point against this conception: As Benjamin Constant remarked, elected representatives are *never* "typical citizens" for the simple reason that they had stood for election and have an interest in being re-elected (p. 73). However, in Sect. 3.3.3. I argued that the basic idea behind proportional representation is *not* the microcosmic conception.

681–683). According to her view, there are three reasons to suspect the hypothesis that principled deliberation is likely to eliminate judgmental inconsistencies. First, if the *grounds* for the proposed policies—and not just the policies—are brought to the public fore, deliberation multiplies issues and creates more opportunities for disagreements, making inconsistencies more likely. Second, deliberation discloses logical connections between the different issues on the agenda. When the grounds of decisions are made explicit, issues become logically entangled, and the likelihood of inconsistencies increases. Third, deliberation tends to transform all issues as matters of principle. This makes more difficult to make compromises.[44] Ottonelli's critique can be illustrated by an example. As we have seen, Pettit believes that the ideal of deliberative democracy requires group-rationality, and, because of the diachronic problem, group-rationality requires a commitment to shared premises. One obvious objection is this: quite often, the opposite, conclusion-based process actually leads to more intuitive results. In the standard example of judgment-aggregation problem given above (Example 5.2) the agenda is *conjunctive* (that is, it consists of atomic propositions and of their conjunction). It is easy to see that a similar problem may arise in *disjunctive* cases (Kornhauser & Sager, 1993, 40). Let us take a political example. Suppose that a committee discusses welfare issues. Their task is to accept a common declaration on the issue. Some of the members argue that poor families in underdeveloped countries should be supported (Q) because it is required by Christian ethics (P1). Some others defend the same policy for secular reasons (P2), while still others think that such a policy is required by Islamic ethics (P3). All the members unanimously agree on the conclusion, but they disagree on the truth or acceptability of the alternative premises:

Example 5.3

	Christian justification	Secular justification	Islamic justification	Aid for the poor?
A	*Y*	*N*	*N*	*Y*
B	*N*	*Y*	*N*	*Y*
C	*N*	*N*	*Y*	*Y*
Majority	*N*	*N*	*N*	*Y*

In this example, all the voters agree on the truth of the disjunctive proposition (P1 or P2 or P3), and also agree that the disjunctive proposition implies the conclusion Q. *All* the atomic parts of the disjunctive proposition, however, are rejected by (some) majority. If the committee follows a premise-based procedure, it votes on the propositions P1–P3 and concludes that because none of them enjoys a majority support, no aid should be given. However, the committee-members unanimously support an opposite policy, and if the committee is a democratically

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[44] One specialist of decision-making gives the following advice: "In collective decision-making, do not try to clarify values if the parties concerned can agree on policies, as they often can, despite their disagreement on values" (Lindblom, 1959, 227).

elected body, the constituents of the members may also support such a policy, although they, like their representatives, may support it for differing reasons. In this case, a commitment to principled premises totally sacrifices democratic responsiveness. The judgment "of the group" is able to override even a unanimous will of all the individual members.

The example illustrates Ottonelli's point principled reasoning may introduce new disagreements. If the committee members are content to vote only on the conclusion, ignoring its possible justification there is no disagreement. The committee members in the example cannot provide *a reason* which could be accepted by *all* reasonable citizens. However they are able to provide *some* reasons to *any* reasonable citizen. This type kind of agreement is sometimes called "incompletely theorised agreement" but that is nothing but a fancy name for the normal situation in pluralist democracies. The chosen policies are often compatible with, and supported by, several, partly incompatible normative and factual premises. Even when majorities agree on those premises subjected to explicit discussion, these premises may, in their turn, be backed by further, perhaps mutually incompatible reasons. Then, one may ask: What would constitute a "*completely* theorised agreement"? In a wider context, apparently premise-based reasoning may actually be conclusion-based, for a premise of one argument is likely to be the conclusion of another. In his early treatise on the judgment-aggregation problems, Albert Heckscher (1892) already presented the basic problem. The assumption is that the decision-makers (or a majority of them) should agree on the reasons justifying a decision. However, these reasons may be backed by further reasons, which could *also* be subjected to collective judgment. If these further reasons are subjected to discussion and perhaps voted on, it is possible that the decision-makers will not agree on these further reasons, although they have reached an agreement (or a majority verdict) on the lower-level reasons. Their higher-order judgments may, again, be based on further reasons. If the decision-makers focus on the premises rather than the conclusion, what stops the regress? The regress of reasons has to be halted somewhere, but the way in which the regress is halted may well have an effect on the final result (*ibid*. 119–20, 132). Even if this observation does not constitute a decisive counter-argument, it is nevertheless important methodologically. In a sense, the question whether a particular series of decisions is seen as an instance of the paradox (in the synchronic or in the diachronic sense) may depend on how far back the chain of interconnected propositions is followed, that is, on the agenda of discussion and decision-making. All recent work on the Judgment Aggregation Paradox is based on the assumption that agendas are given: it does not tell how the agendas *should* be built. As with the initial Habermassian ideal of reasoned consensus, one may ask whether the ideal behind the theory is relevant at the first place. In all real-life decision-making, some background propositions must be taken as granted. Outside the timeless ideal speech model, *some* reasons are necessarily left unstated, and those in the majority may well disagree on these unstated premises, although they happen to agree on the propositions put on the agenda. *Total* majority consistency is as outlandish as

Habermas's complete consensus—unless the people or at least the members of the majority are complete replicas of each other.

The counterarguments presented above are all related to the synchronic consistency of decisions. What about *diachronic* consistency, the requirement that the decisions of a body should be consistent over time? Here, the trade-off is not only between democratic responsiveness (which requires that decisions should be accepted by majorities) and group-rationality (which requires consistency). There may also be a trade-off between different aspects of rationality. Recall Pettit's notion of group rationality quoted above: "People should take steps to ensure that where their voting would lead to inconsistent or *otherwise irrational* policies, this is remedied and group rationality prevails" (my emphasis). Inter-temporal consistency is only *one* aspect of collective rationality. Changing circumstances and new information may provide good reasons to revoke past decisions, and an *inability* to revoke them is one possible sign of irrationality. Someone who mechanically executes a pre-established programme is no more rational than someone that is unable to execute any constant plan. If a body which constantly overrides its past decisions seems to suffer of the weakness of will, a body which refuses to change its decisions in new situations behaves like a stubborn or compulsive individual. The latter form of irrationality can be as troublesome as the former. For example, one problem which haunts multi-party coalition-politics is that when parties have, perhaps after complicated negotiations, agreed on a common programme, it may often be difficult to revise the programme in new circumstances. Parties consider themselves to be committed by the programme, while the individual members are bound by the party discipline. By treating the programme as an irrevocable premise, the Parliament is able to have "a will" of its own, a will which may override the will of the current majority. There is, however, no reason to think that the earlier will of the Parliament is *necessarily* more rational than the present one. Here the courts which are bound by precedents, by the prevailing legal doctrines, and by the letter of law are in a different position.

The problem may also be seen as an instance of the tension between the two principles of representation: the mandate principle and the accountability principle. According to the mandate principle, people empower their representatives in elections to execute a particular policy or policies. Hence, political platforms should be taken as premises. According to the accountability principle, people evaluate in elections the past performance of elected officials. As Ottonelli (2010, 675) remarks, Pettit's requirement that public decisions should be justifiable to the citizens necessarily constrains the inter-temporal consistency requirement. Decisions should be "contestable", in other words, it should be possible, at least in principle, that the citizens could *successfully* challenge the justifications provided by the decision-makers. Then, consistency over time cannot be an absolute requirement.

To conclude, there are at least two possible ways to criticize Pettit's account. Pettit argues that (1) democratic bodies can and should be like persons with a will of their own, but that (2) in order to have a will, their reasons *and* conclusions should be synchronically as well as diachronically coherent. Therefore (3) the

responsiveness of decision-making has to be constrained. One may challenge the requirement (1), but the requirement (2) is equally controversial. Coherence is a matter of degree. Pettit seems to base his view on an unquestioned supposition that in order to be a person, or to have will, a being has to be *very* coherent. As we have already seen, Riker's and Pettit's arguments against "populism" are older than the theory of social choice. In 1848, Pierre-Joseph Proudhon presented the basic argument:

> The People, the collective being—I almost said rational being—does not speak in the true sense of the word. (. . .) I am not getting involved in the investigations of esoteric psychology: as a practical man I ask in what manner this soul, reason, will, or what have you is set outside itself, so to speak, and makes itself known? (. . .) Does the People, which is sometimes said to have risen like a single man, also think like one man? Reflect? Reason? Make conclusions? (. . .) Now if the People has, in all historical epochs, thought, expressed, willed and done a multitude of contradictory things; if even today, among so many opinions which divide it, it is impossible for it to choose one without repudiating another and consequently without being self-contradictory—what do you want me to think of the reason, the morality, the justice, of its acts?

Some authors, for example Colin Bird (2000), David Copp (1995) or Isaac Levi (1986) argue that the standard Arrovian conditions can, *mutatis mutandis*, be applied to *individual* decision-making. Individuals have different, competing desires and values, and we may ask whether the overall rankings or actual choices result from a process which respects conditions analogous to those applied in the standard (Arrovian or Pettitian) theories of social choice. Copp (1995, 158) argues that the preferences of a rational individual need not to respect the universal domain condition; a rational individual needs not to be able to compare *all* available options. Bird (2000) claims that at the level of individual reasoning the principles corresponding to Arrow's non-dictatorship, Pareto and Independence conditions are often violated. In spite of all this, individuals are capable of possessing rational wills. Even a person suffering from serious mental disabilities may be able to express a clear will in *some* issues. We may think that in such issues their expressed will has a normative force. Why couldn't we say for example that in some particular issue The People may have a clear will, while in most issues it has no will at all?

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Chapter 6
Pluralism and Majority Decision

6.1 On the Political Theory of Democratic Pluralism

"Political pluralism" is a vague notion. The late nineteenth and early twentieth-century theories of pluralism [those put forth, for example, by Otto von Gierke, J. N. Figgis, G. D. H. Cole, and Harold Laski; see the anthology edited by Hirst (1989)] were based on the idea of the metaphysical and moral relevance of social groups, and the simultaneous rejection of the State and the sovereignty as the centre of politics. Typically, these early theorists conceived groups as integrated wholes, and advocated either their self-determination or a system of political representation based on group membership. In contrast to the modern pluralist theories, the early pluralists conceived groups as permanent entities with fixed interests; this justified interest-representation. Such a view is, however, incompatible with the majority principle. Arguably, it is incompatible with the principle of equality of citizens. It justifies non-neutral and non-anonymous institutions of representation.

6.1.1 The Forerunners of Pluralism: Constant and Kelsen

The nineteenth century political theorist Alexis de Tocqueville is often hailed as the first predecessor of theoretical pluralism. However, the political theory of Benjamin Constant is another interesting and somewhat neglected forerunner. In his *Principes de politique* (1815/1988) Constant formulated a liberal theory of representative government. The mistake of Rousseau (shared by the early utilitarians such as James Mill) was the axiomatic supposition that the "People", sharing a common condition, would never harm themselves. In practice, the will of the people was always the will of some people only. While rejecting Rousseau's populism, Constant nevertheless maintained the principle of "the supremacy of the general will over any particular will" (p. 175). Majority rule was necessary, for its only

alternative was the imposition of the particular will of some minority group. However, the authority of majorities has to be constrained by the principle of liberty. The problem was not, as many contemporary conservatives thought, that in a democracy the disadvantaged "many" would tyrannize the previously privileged "few". Rather, the problem was that without constraints, *any* majority coalition might become tyrannical (p. 178).

Although Constant emphasized the role of constitutional safeguards, he also recognized two non-institutional ways to temper and control power-holders. One was deliberation and free discussion; the other was *compromise*:

> What is after all the general interest if not the negotiation that takes place between particular interests? What is general representation but the representation of all partial interests which must reach a compromise on the objects they have in common? The general interest is certainly different from particular interests, but it is by no means opposed to them. (. . .) One hundred deputies, nominated by a hundred sections of the state, bring into the assembly the particular interests, the local preoccupations of the electors. This stand-point is useful to them. Forced to decide together, they soon become aware of the sacrifices which are indispensable. They attempt to reduce the extent of these sacrifices, and this is the advantage of their mode of nomination. Necessity always unites them in a common transaction, and the more sectional their choices, the more representation attains its general aim. (Constant, 1815/1988, 205–206)

Another neglected predecessor of modern pluralism was Hans Kelsen's theory of democracy presented in his *Wom Wesen und Wert der Demokratie* (1929) and in several articles. Although a century separates Kelsen from Constant, the argumentative situations in which they wrote their political works were somewhat similar.[1] Like Constant, Kelsen was a liberal who had to defend parliamentary democracy against its enemies from the Right and from the Left. Both theorists wanted to dissociate themselves from Rousseau's unrealistic conception of the general will, without abandoning the basic idea of democracy as popular rule.

In the nineteenth century, the ideas of popular sovereignty and of the general will inspired the bourgeois democrats as well as the socialist radicals (Rosanvallon, 2006). From the beginning of the twentieth century, it became clear that modern mass democracies had their own dynamics which was incompatible with the classical ideal. The nascent new science, political sociology, established by authors such as Vilfredo Pareto, Gaetano Mosca, Roberto Michels and Max Weber, focused on the gap between the classical ideal and the harsh realities of modern democracies. Modern democracies were characterized by limited political participation, *de facto* elite rule, centralized parties, intense struggles between interest-groups, narrow, heterogeneous and switching majorities, as well as mass demagoguery and Caesarist tendencies. However, when revealing these imperfections, the political

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[1] Ankersmit (2002, Ch. 4) analyses the political problem of the post-Napoleonic era: "The gap between different ideologies was correctly perceived to be too deep to allow consensus. (. . .) Hence, the best they could realistically strive for was not consensus, but compromise. And (. . .) compromise is governed by a kind of political logic other than consensus: for compromise, unlike consensus, retains the possibility of cooperation even when people hold different views and are also determined to maintain these." (p. 96).

sociologists left democracy defenceless. The implied and sometimes explicitly stated conclusion was that democracy was a failure and could just as well be replaced with some other system. Of the early political sociologists, Pareto and Michels actually embraced the anti-democratic regime of Mussolini.

Hans Kelsen's theory of democracy should be understood in this context. His explicit aim was to formulate a *realistic* normative alternative to the democratic ideal derived from Rousseau.[2] In this, he could be compared to another Austrian political theorist writing under the same period, Joseph Schumpeter (1942). Although Schumpeter is often seen just as an empirically-oriented critic of the classical ideal, his own theory was motivated by normative considerations. He abandoned the three central ideas inherited from Rousseau: the common good as the proper aim of politics, the notion of general will, and the concept of sovereignty as the starting point of all political theorizing (Schumpeter, 1942, 250–252). He defined democracy in purely procedural terms: according to his famous definition, "The democratic method is that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people's vote" (p. 260).

Kelsen agreed with Schumpeter on many issues. He similarly defined democracy in procedural terms, rejecting the idea of the common good (Kelsen, 1955, 2) and interpreting the "will of the people" as a juridical fiction. Moreover, in his legal theory, sovereignty was a purely juridical notion. Nevertheless, the disagreements between the two great Austrians are equally important. Schumpeter's rejection of Rousseau's "classical view" was total and uncompromising. Although Schumpter did not—*contra* some interpretations—consider democratic processes and market processes as strictly analogous, his justification of the "democratic method" was based on a sort of invisible hand argument. In this view, all the positive aspects of the democratic method were contingent, indirect and unintended consequences of the process of political competition. The competitive process itself had no inherent value independently of its consequences.[3] Ultimately, as Mackie (2009, 146) remarks, Schumpeter's conclusions were quite close to those drawn by the openly anti-democratic elite-theorists. In contrast, Kelsen was a committed democrat who tried to preserve some essential aspects of the classical ideal; Rousseau's *Social Contract* remained as the starting point. For Kelsen, democratic procedures were *conceptually* related to the ideals of freedom and equality (1955, 4). For him, democracy is

> a government exercised by majority decisions of a popular assembly or of a body or bodies of individuals or even by a single individual elected by the people. (. . .) By 'people' all the adult individuals are to be understood who are subject to the government exercised directly by the assembly of these individuals or indirectly by the elected representatives.

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[2] In the second edition of *Vom Wesen und Wert der Demokratie* (Kelsen, 1929) Kelsen addressees the sceptics more widely, while in the first edition (Kelsen, 1920) the main target is the Bolshevik critique of "formal" democracy.

[3] Schumpeter seems to have ignored the possibility that something could *simultaneously* be inherently valuable and valuable as a means to some further end.

Democratic elections are those which are based on universal, equal, free, and secret suffrage. (pp. 2–3)

While Kelsen's and Schumpeter's theories are both "proceduralist" in the sense that they identify democracy as a system of effective rules of decision-making, it does not follow that democracy has to be *justified* only by appealing to procedural values. In the case of Schumpeter, this is definitely *not* true: for him, democracy is legitimate only because of the probable indirect consequences of political competition.

It is often said that procedural conceptions of democracy make democracy merely "a matter of form". Kelsen, however, argues that the difference between "form" and "content" is not absolute. The democratic freedoms set substantive limitations of democratic procedures. Nevertheless, they should be seen as elements of the procedure; without those limitations, a procedure cannot be conceived as democratic (pp. 4–5). Kelsen admits the possibility of a conflict between liberalism and some versions of majoritarian democracy (Kelsen, 1955, 3). At the same time he thinks that the proper limits of majority rule can be derived from the *majoritarian procedure itself*. In his book *Wom Wesen und Wert der Demokratie*, Kelsen argued that while the majority principle is essential for democracy, it can neither be justified in epistemic terms nor be characterized as an imperfect approximation of the unanimity rule. To put it briefly: a majority's claim to power is based on nothing but the fact that it happens to be a majority. This observation has definite consequences. The validity of power-claims can found out only in a free and fair democratic process in which citizens are allowed to campaign for and against power-holders, and to vote according to their own views. The votes have to be duly counted, and power has to be distributed according to the voting-results. According to Kelsen's "dialectical" argument, the unique property of majority rule is that it presupposes the recognition and continuous existence (or at least possibility) of a dissenting minority, for there cannot be a majority without a minority. This presupposition is incompatible with any power claim based on some non-numerical property, *including* the claim of the majority's epistemic superiority. Moreover, decisions made by majorities remain legitimate only if they are *continuously* accepted by majorities, and this can be known only if it is continuously possible to challenge the earlier decisions and to test their present support. Decisions can be meaningfully challenged—and confirmed—only if they are revocable (Kelsen, 1929, 53, 56, 98–104; 1945, 287; 1955, 27). This requires, first, that there should be free, fair and regular elections. Second, it requires that minorities should have effective rights to monitor and criticize the actions of the government as well as rights to make their own, competing proposals. Kelsen's conclusion is that majoritarian democracy is conceptually incompatible with any form of dictatorship, including a dictatorship established and (temporarily) supported by an electoral majority.[4] The argument solves the problem inherent in

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[4] Here Kelsen disagrees both with the liberal critics of majoritarianism and with his illiberal interlocutors. They all argue that "democratic dictatorship" is conceptually meaningful (Adler,

epistemic versions of populism: the justification of the majority principle provides simultaneously a justification for the continuous existence of a post-decisional opposition (cf. Sects. 5.5.2 and 5.5.5).

6.1.2   Maximizing Self-Government

In *Du contrat social*, Rousseau puts his basic question in the following terms:

> The problem is to find a form of association which will defend and protect with the whole common force the person and goods of each associate, and in which each, while uniting himself with all, may still obey himself alone and remain as free as before (I.vi., p. 174)[5]

In a sense, this is also the question Kelsen tries to answer. Rousseau's own view, accepted by Kelsen as the starting-point, is that the ruled are completely self-governing if and only if they are *identical* with the rulers. This means that *all* governing norms are approved by *all* those who are governed by them:

> The ideal of self-determination requires that the social order shall be created by the unanimous decision of all its subjects and that it shall remain in force only as long as it enjoys the approval of all. (Kelsen, 1945, 285)

However, this complete identity of the rulers and the ruled is unattainable. Even in a direct democracy, not all who are affected by norms (such as minors or foreigners) are entitled to participate; moreover, many people do not participate even when they are entitled to. Most importantly, when people disagree some are necessarily governed against their will. One might think that the unanimity rule would be a natural consequence of the ideal of identity.[6] The unanimity rule is, however, paradoxical in more than one sense. First, what happens under the unanimity rule when people *change their minds*? If they are bound by their earlier will, they are not free to follow their own will. If they are not bound, the unanimity is simply a contingent declaration of a congruent intention without any authoritative force; in effect, the people remain in a state of nature. Second, the unanimity rule is *decisive*—in Kelsenian terms, "produces a definite normative order"—only if there is at least one state of affairs which needs *not* to be approved unanimously, the default outcome (usually, the *status quo*) which results if no positive proposal commands a unanimous approval. Under unanimity rule, every decision-maker has the right to veto against every proposal *except* the default outcome. In an extreme case the default outcome has to be imposed against the will of every decision-maker except one (and even for him or her, it may be only of a bad

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1926/1930, 131, 149–151; Schmitt, 1923/1985, 16–17, 28; 1928/2008, 266; Schumpeter, 1942, 242).

[5] Kelsen quotes Rousseau's famous formulation on several occasions (Kelsen, 1929, 6; 1955, 21).

[6] See Wolff (1970/1976); for a response similar to that of Kelsen, see Graham (1982). Neither author seems to be aware of Kelsen's earlier treatment of the same problem.

second-best). Clearly, the rulers and the ruled are not even approximately identical. Hence, the unanimity rule needs not to maximize individual freedom unless conflicts of wills are unlikely or non-existent (Kelsen, 1955, 22).

Because full identity is impossible, democracy must presuppose *some* "weaker variant of the identity thesis" (Vinx, 2007, 118–119). In one weaker variant, the identity requirement is replaced by the requirement of *maximal overlap* of the rulers and the ruled. In another variant, the unanimity requirement is preserved but democracy's applicability is limited to *non-pluralistic conditions*. In the jargon of the social choice theory, the domain of choice has to be restricted. Two of Kelsen's contemporary critics, Carl Schmitt on the Right and Max Adler on the Left, chose the latter alternative. Both shared with Kelsen the Rousseau-inspired regulative idea of democracy as an identity between the rulers and the ruled (Adler, 1926/1930, 36; Schmitt, 1923/1985, 14, 26–27). Schmitt argued that the social contract is actually a superfluous element in Rousseau's view, for the predominance of the general will is ensured by the pre-existing homogeneity of the parties of the alleged "contract".[7] By using an analogous argument, Schmitt stated that the "mechanical" majority principle was without any real legitimating force. If the decision-making community was sufficiently homogeneous, voting simply confirmed the pre-existing unanimity. If the community was not sufficiently homogeneous, the majority principle would become just an arbitrary instrument of majority domination.[8] While it is not difficult to see why an authoritarian conservative such as Schmitt may find the argument appealing, it is somewhat surprising that Adler, the leading Austrian theorist of Marxism, uncritically followed the lead. Of course, for Schmitt "homogeneity" meant national or ethnic homogeneity—possibly created through violent exclusion—while for Adler it meant the absence of class divisions (Adler, 1926/1930, 82–83; Schmitt, 1923/1985, 9; 1928/2008, 262–263).

Unlike his anti-liberal critics, Kelsen accepts the first weakening of Rousseau's identity requirement. He argues that in pluralistic conditions the *simple majority principle* comes closest to the full identity and therefore *maximizes political self-determination*. This is not obvious. One would expect that if unanimity is unattainable, some qualified majority requirement would constitute its nearest approximation. Kelsen's argument is the following. First, consider minority rules, that is, decision rules which would require *less* than a half of the all votes for a decision. For those rules, the largest number of voters who might be compelled to act against their will must be greater than 50 %. Second, consider qualified majority rules. They require *more* than a simple majority for a decision. For those rules, the largest possible number of voters who might be forced to accept a decision against their

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[7] "The general will as Rousseau constructs it is in truth homogeneity. That is a really consequential democracy. (. . .) The democratic identity of governed and governing arises from that" (Schmitt, 1923/1985, 14; cf. Schmitt, 1928/2004, 248, 264–276, 300).

[8] "The method of will formation through simple majority vote is sensible and acceptable when an essential similarity among the entire people can be assumed. For in this case, there is no voting down of the minority. Rather, the vote should only permit a latent and presupposed agreement and consensus to be evident" (Schmitt, 1932/2004, 27–28).

will is one voter short of the required quota, (say, 75 % minus one voter). In both cases, the maximum number of unsatisfied voters is greater than 50 %. In contrast, when the simple majority procedure (>50 %) is used, the maximum amount of those compelled to act against their will must *always* be less than a half of the population. If a voter's political freedom is defined as the compatibility between his or her will and the content of the decision (or the norm resulting from it), the largest possible number of those who are not free is minimized under the simple majority rule. In other words, the majority principle maximizes the number of those citizens who obey themselves rather than an alien will (Kelsen, 1929, 6–10; 1945, 286–287; 1955, 24–25). This kind of argument is repeated by Robert A. Dahl (1989, 138–139), although he seems to be unaware of Kelsen's earlier treatment of the problem.

Kelsen's argument may be explicated in terms of a formal result proved later by Douglas Rae (1969). The result says that—under certain conditions—the simple majority principle *maximizes the probability of each individual's being on the winning side*. This result can be illustrated by an example (modified from Nurmi, 1998b, 106–108). Suppose that five individuals have to agree on a common decision rule. As in Kelsen's argument, all decision-situations are assumed to be dichotomous choices, either "Aye" or "Nay". The individuals want to choose a rule which would minimize their expected losses. Because they are behind "a veil of ignorance" they do not know what the future issues might be, whether they are more likely to be on the winning side or on the losing side or what will be the stakes; the individuals have no information that would help them to tailor the voting rule for their own advantage. Hence, they are all in the same position. Wanting any specific information each individual (i) has to consider all the 32 logically possible vote distributions as equally probable, and to suppose that each decision has the same value. (In the table below, '+' means that the resulting decision is compatible with i's will while '$-$' means that it is incompatible.)

Example 6.1

	Decision-rule			
	Number of cases	3/5	4/5	Unanimity
i alone supports a decision	1	$-$	$-$	$-$
i and one other voter supports	4	$-$	$-$	$-$
i and two others support	6	+	$-$	$-$
i and three others support	4	+	+	$-$
All support	1	+	+	+
i alone opposes	1	$-$	$-$	+
i and one other voter opposes	4	$-$	+	+
i and two other voters oppose	6	+	+	+
i and three other voters oppose	4	+	+	+
All oppose	1	+	+	+
Total number of cases	32			
Outcomes compatible with i:s will		22/32	20/32	17/32

Simple counting shows that with a lower majority quota of three-fifths, the decision is unfavourable to i in 10 cases $(1+4+1+4)$ out of 32. With a higher quota of four-fifths, the number of unfavourable decisions is 12 $(1+4+6+1)$, and the still higher unanimity quota gives an unfavourable result in 15 cases $(1+4+6+4)$. The closer a rule is to the simple majority-principle, the greater is the expected proportion of decisions compatible with i's will. Rae's result can be seen as a hypothetical contract argument for the simple majority rule. Instead of supposing that the hypothetical choosers behind the veil of ignorance try to minimize their expected losses (as in Rae's proof) we may suppose that they try to maximize their opportunities to be self-determining in the Kelsenian sense. The argument shows why the hypothetical contractors would subscribe to Rousseau's dictum that "apart from this primitive contract, the vote of the majority always binds all the rest" (Rousseau, 1762/1973, 173).

6.1.3   The Problems of Kelsenian Pluralism

The assumption behind the reconstructed Kelsenian argument is that the contract parties can treat all the decision-situations as equally probable. In the real life, the possibility of *permanent* minorities (and majorities) creates a problem. To illustrate the problem, let us suppose that there is community of five people. Within the community all decisions are made by using majority rule. All members are allowed to participate, to speak, to make proposals and to vote; there is no "majority tyranny" in the traditional sense. However, *every* decision is made by three votes against two, and the same people form the majority and the minority in *every* case. The will of those two in minority *never* prevails. They have no influence on the outcomes; in effect, they might as well be disenfranchised. If a dominant majority is permanent in the sense that it is based on some stable pre-political differences (for example on ethnic or religious divisions), one may ask what rational reasons those in a permanent minority position have to obey the democratic procedures. The contractual interpretation of Kelsen's freedom-based argument presented above makes the problem visible. The choosers were behind a "veil of ignorance". If the hypothetical contractors are *not* behind a sufficiently thick "veil", they might not be able to agree on the majority principle—or on *any* general way to make decisions. There seems to be a dilemma: Either, following theorists like Carl Schmitt on the Right or Max Adler on the Left, one has to admit that a true democracy presupposes, after all, substantive homogeneity without minorities. Or then, following Hayek (1960/1976, 103–117) and other conservative liberals, one has to limit the range of majority rule by strong (substantive) constitutional restrictions. Whichever alternative is chosen, the role of the majority principle is diminished.

Kelsen, however, argues that the majority principle need not lead to majority domination. In practice its internal dynamics tends to produce *compromise-outcomes*:

> In social reality, there is no absolute rule of the majority over the minority, the common will constructed by the so-called majority principle is not a diktat of the majority to the minority but a result of reciprocal influences of both groups, a resultant of the clash of their political wills. (...) This is especially true in parliamentary democracy. The entire parliamentary process, with its dialectic-contradictory technique of speech and reply, argument and counter-argument, aims at achieving compromise. Therein lies the real meaning of the majority principle in real democracy; it is better described as the majority-minority principle. By dividing the norm-subjects essentially into only two groups, a majority and a minority, it creates the possibility of compromise in the creation of the common will. (...) The entire parliamentary procedure aims at achieving such a middle way between the opposing interests, a resultant of antagonistic social forces. (Kelsen, 1929, 56–58, my translation)

One way to read this passage is to equate Kelsen's "middle way" with the notion of the Condorcet-winner. However, I am not arguing that Kelsen is just a social choice theorist in disguise. He also sees democracy as form of public deliberation; according to him "the will of the community in a democracy is always created through a running discussion between majority and minority" which takes place, "not only in parliament, but also, and foremost, at political meetings, in newspapers, books and other vehicles of public opinion" (Kelsen, 1945, 287–288). Hence his "middle way" does not result simply from the aggregation of pre-existing preferences. Kelsen's model of discussion, however, is *not* the unconstrained ideal speech situation favoured by Jürgen Habermas and his followers (Sect. 5.5.7). Rather it is a dispute structured by a pre-given agenda. There are almost always two sides, proponents and opponents, and the outcome of such a discussion is, more often than not, a synthesis of the contradicting opinions. Unlike many theorists of deliberative democracy, Kelsen does not see negotiated compromises and rational discussion as opposites (cf. Sect. 5.5.6). Compromises and rational persuasion are *both* linked to Kelsen's notions of self-government conceived as correspondence between will and norms, and democracy as the arrangement which tends to maximize this correspondence. If political outcomes are based on discussions *and* compromises, they are likely to correspond with the will of a larger group of citizens. Democracy, thus conceived, tends to approximate a system based on unanimity, and therefore, to maximize political freedom understood in the Kelsenian way. Democracy is definitely *not* a system governed by "minimum winning coalitions".

The problem with Kelsen's solution is that although compromises and rational discussion are still "procedural" notions in one sense of the term, they—unlike the majority principle or the freedom of speech—cannot be implemented solely through procedural rules. Parties could perhaps be forced to sit together but they cannot be forced to make concessions or to engage in a serious exchange of opinions. Kelsen believed, however, that there were genuinely procedural means at least to make compromise-outcomes more likely. First and foremost, democracy should be representative rather than direct. Second, representation should be collective. Third, representatives should be relatively independent of their constituencies (the rejection of imperative mandate). Fourth, assemblies should be elected on a proportional basis. Fifth, *parties* are essential for modern democracy.

From a Rousseau-inspired point of view, all these arrangements (except perhaps the second) are problematic. However, they all find their justification within Kelsen's modified democratic framework. Kelsen tried to assess political institutions in terms of their tendency to produce acceptable compromises. The principle of compromise constitutes an independent argument for parliamentary representation. First, compromises are difficult or impossible in direct mass democracy. Second, compromises require the representation of different interests and opinion groups, thus excluding Thomas Hobbes' and Carl Schmitt's "single trusted representatives". Third, if representatives were merely mouthpieces of their constituencies (imperative mandate), compromises would again, become difficult or impossible. Fourth, corporatist representation (supported not only by the Fascists and conservative Catholics, but also by the early pluralists) has, according to Kelsen, no inherent tendency towards compromise-solutions. Corporatist representation "freezes" the existing political divisions. Moreover, most schemes of corporate representation are based on organized representation of purely economic interests, and therefore, are less suitable to deal with *ideological* conflicts. If politics were based on compromises acceptable to as many citizens as possible, the parliamentary form of representation would remain the best alternative.

In his defence of proportional representation, Kelsen relies on several interconnected arguments. He defends proportional representation, *not* in terms of the microcosmic conception of representation (Sect. 3.5.3) but rather as a means to avoid compound majority paradoxes (Kelsen, 1945, 295–296; cf. Sect. 2.2.3) and to secure wide representation of differing interests and viewpoints (Kelsen, 1929, 61).[9] His argument, like that of J. S. Mill, is compatible with a liberal-individualistic view of the nature of representation. The decision-making *within* the parliament has to be made according the formal majority-principle, but in a multi-party system, the will of the majority is necessarily based on compromises. Proportional representation ensures that different interests and ideological positions are always represented. Because none of them is likely to gain a parliamentary majority in a pluralistic society, compromises are unavoidable.

Proportional representation, in its turn, presupposes the existence of organized party-groups. According to a long tradition, still dominant after the First World War, party divisions and the existence of an opposition—an almost inevitable consequence of such divisions—are dangerous and likely to undermine republican governments (Hofstadter, 1969; Rosanvallon, 2006). Kelsen's defence of political parties is one of the most original parts of his political theory. Again, he does not rely on one single argument. First, given the nature of modern mass democracy, political parties are *inevitable*. As Rousseau, (and after him, both Hegel and Benjamin Constant) noticed, the causal impact of an individual voter diminishes

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[9] Schumpeter (1942, 273) rejects proportional representation: "If acceptance of leadership is the true function of the electorate's vote, the case for proportional representation collapses because its premises are no longer binding." Pereira (2000, 71) remarks that this is a good argument only if the "acceptance of leadership" is the *only* function of elections.

into insignificancy when the electorate becomes sufficiently large (cf. Downs, 1957; Rousseau, 1762/1973, III.i., p. 210). This creates a problem of motivation: If one single vote never makes a difference, then why bother to vote at all? Kelsen argues that this situation gives rational voters incentives to pool their resources by forming organized groups. Given the freedom of association, there is no way to prevent such pooling. Hence, a democratic state necessarily becomes a party-state.[10] Second, parties are not only inevitable, they also have positive function. They structure political debate by creating an agenda. They emphasize some issues while downplaying others thus creating space for mutually beneficial exchanges, and they also make compromises credible by applying internal discipline and, at the same time, taking responsibility for the outcomes. Far from being a threat to freedom, the party-state is, for Kelsen, both the logical consequence and the indirect guarantee of political freedom.[11]

In spite of the temporal distance and of the different background philosophies, the defences of Constant and Kelsen regarding parliamentary government had a lot in common. Both thinkers were liberals who emphasized the value of (liberal) freedom but nevertheless considered the majority rule as the only legitimate way of making (non-constitutional) decisions. Both authors argued that the legitimacy of the institutions of representative government and majority rule are partly based on their inherent tendency to produce widely acceptable compromises. In this they stressed the both role of interests *and* of public deliberation. Their views transcend the simple dichotomies "liberal vs. populist" and "deliberative vs. aggregative". Constant and Kelsen also share a common weakness. They were rather vague when explaining the operative motivation behind compromises. Kelsen argues that the problem of permanent majorities can be avoided because *in practice* majoritarian democracies include compromise-producing mechanisms. The outcomes of majoritarian processes tend to approximate unanimity, thus maximizing political liberty. The main weakness of this argument is that it is based on the empirical tendencies. Kelsen does not really explain *why* majority rule would possess the required tendencies. It is possible that under some circumstances manipulative methods— for example, extensive propaganda campaigns—would be even more effective in engineering consent.

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[10] This is sometimes called "Schattschneider's law": in a representative system with a sufficiently wide electorate and some freedom, competing organized political groups are bound to emerge.

[11] Ian Budge (2005, 2) acknowledges—almost alone—the central role of parties in transforming representative systems from "elective aristocracies" into systems which put the policy questions directly before the electorates.

6.1.4   Modern Pluralists and Social Choice

The most influential post-war pluralist theorist is certainly Robert A. Dahl (1956, 1989, 2003)—although a large part of the empirical and theoretical work on democracy written after the World War II can be characterized as "pluralist" in a wider sense. Pluralism as a political theory need not be based on the supposition that there is no such thing as the "common good" (as was argued by Schumpeter and Kelsen), or that there must be a plurality of goods (Bellamy, 1999), or that the plurality of political views as such, is a good thing (Mouffe, 2000). Political pluralism is not incompatible with these philosophical claims; however, it is only committed to the more limited claim that *in the conditions of the modern state*, pluralism of opinions and interests is a fundamental and all-pervasive fact, and that a comprehensive consensus on the common good is, in most cases, an impractical ideal. In his earlier works, Dahl combined his pluralism with an empiricist philosophy of science and a rather optimistic view of the working of actual democracies. One important issue neglected in these early works was the role of the political agenda. He was heavily taxed for these omissions by his radical critics (Bachrach & Baratz, 1963; Barber, 1984; Pateman, 1973). In the more recent versions, Dahl has distanced himself somewhat from these aspects of his early pluralism.

Nevertheless, Dahl's classic work *A Preface to Democratic Theory* (1956) is still worth of reading. In this early work, he draws the distinction between "Madisonian" and "populist" versions of democracy. Unlike Riker, Dahl does not see "populism" and Madisonian liberalism as the only possibilities; he criticizes *both* the idea of "the will of majority" as an unambiguous criterion for decision-making *and* the Madisonian fear of "majority tyranny". He remarks that the Madisonian anti-majoritarian institutions could also be associated with epistemic elitism, the *bête noir* of the post-war sceptical liberals (Sect. 5.5.2):

> Ironically, the worry about the dangers of majorities has been shared not only by aristocratic elites but also by political adventurers, fanatics, and totalitarians of all kinds, so that this style of thought takes many forms and finds advocates as different as Plato and Lenin. (Dahl, 1956, 31–32)

The examples of Schmitt and Adler, discussed above, confirm Dahl's judgment; both theorists criticized majority rule, if not from totalitarian, then at least from firmly anti-liberal positions.

According to Dahl (1956, 133) if majority rule is mostly a myth, then majority tyranny must be a myth, too. If majorities are unable to rule, they are also unable tyrannize. The conservative and liberal opponents of Rousseau were of course right when insisting that the "People" or the "Community" are not unitary actors. The "will of the people" can mean only the will of a majority of the people. But, contrary to the anti-majoritarian critics, it is equally untrue that "the numerical majority is as truly a *single power* (. . .) as the absolute government of one or the few" as Calhoun (1853/1953, 29) had it. Like the "People", the "majority" is also a composite body. Democracies are ruled by several, switching, partly overlapping majorities consisting of several temporarily allied minorities. There are no

permanent minorities or majorities. The classical pluralists were equally wrong when they conceived minorities as closed, organic groups. In a modern democratic society, most citizens belong to several, partly overlapping groups. Almost all citizens are in a minority in some situations and in a majority in other situations. This fact has several normatively important consequences. First, this kind of pluralism prevents majority tyranny as well as minority tyranny. In a pluralistic polity guarantees of freedom are not to be found in constitutional forms but in extra-institutional factors (Dahl, 1956, 134). Second, the rule of switching majorities counteracts political alienation by giving most citizens some rational motives to participate in political decision making, for today's losers have some hope of becoming tomorrow's winners. Third, because there are no permanent political friends or enemies but only switching coalitions, parties and groups have incentives to behave moderately in politics and to search for compromises. In these ways, pluralism maintains *systemic* stability: A pluralist polity is stable for the very reason that its *policies* are not "stable" (Sect. 5.4.3). In a pluralist polity, there is no permanent "common will", no rational guiding hand. Neither the People nor the majority can form a "decisive set" which, as shown by Arrow's Theorem (Sect. 4.1.1) is necessary for a rational collective ordering. *The very absence of a permanent majority will justifies the use of majority rule*.

Before the 1980s, pluralistic political science and formally oriented study of social choice had almost no contacts, although Dahl in his *Preface* briefly commented on the findings made within the new discipline of social choice. In a path-breaking article—which appeared just after the publication of Riker's *Liberalism against Populism*—Nicholas Miller (1983) gave a new twist to the discussion on the interpretation of the social choice results. Miller explicitly compared the two traditions in political theory. Miller (1983, 735) states that the fundamental postulates of the post-war pluralistic theory are that (1) societies are divided along several lines of fundamental cleavages that partition their members into different groups, and (2) the preferences of members of a society, with respect to alternative public policies, are largely determined by the social groups to which they belong. Moreover (3) especially in modern societies, the cleavages are often related to one another in a cross-cutting rather than mutually reinforcing way. Properties (1) and (3) distinguish democratic pluralism from the other forms of pluralism (for example, of the corporatist pluralism of the medieval and early modern *Ständesstaat*).[12] Finally, (4) not only preferences but preference *intensities* or political priorities are dispersed, different issues being salient to different groups. The last property makes mutually beneficial compromises possible. Miller's main point is this: when the pluralist postulates (1)–(3) are applicable, *the resulting preferences over public*

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[12] Kelsen discusses the difference between corporatism and democratic pluralism in his work (Kelsen, 1929, 47–52). Between the Wars, a return to some version of the corporative *Ständestaat* was advocated by many people—not only by the Fascists but also by such early pluralists as Leon Duguit or C. D. H. Cole—and Kelsen's home country, Austria, introduced an authoritarian version of it after the 1934 coup.

policy alternatives are—to use the social-choice terminology—*likely to be non-single peaked*. In a pluralistic society, this is a likely effect of the condition (3).

In practice, the pluralistic distribution of preferences is manifested by switching majority coalitions and extensive political bargaining. To present the same point in another way: if preferences in a society *are* single-peaked—if, for example, there is a permanent majority or if only one political dimension (say, Right-Left) is all-important—the society is necessarily *less* pluralistic. The "paradoxical" aspect of this observation is that the preference patterns identified by pluralist theory as promoting political *stability* are essentially those identified by social choice theory as entailing *instability*. The solution of this anomaly is, of course, that the two theories are speaking about the two different types of "stability" (Sect. 5.4.3): pluralists are interested in the long-run stability of the political system, while the social choice theorists focus on the narrower notion of stability of decisions or policies. There is a conflict of values between the pluralist theory and the (Rikerian) social choice, but Miller argues that "on the whole, it seems clear that we should choose political [systemic] stability" (p. 742). While "stability" as such is not a virtue, Miller's conclusion sounds plausible when we are talking about the stability in a democratic society.

Unlike Buchanan, Plott, and some others, Miller does not argue that "collective rationality" is a merely an implausible technical condition. According to him, "it has important implications, both normative (...) and empirical". However, in a wider context, the possibility of "collective *irrationality*"—Riker's (C)—problem—is a positive rather than a negative phenomenon:

> Precisely because social choice is *not* stable, i.e., not uniquely determined by the distribution of preferences, there is some range for autonomous politics to hold sway, and pluralistic politics offers everybody hopes of victory. (Miller, 1983, 743)

From our point of view, the most important part of Miller's argument is its normative conclusion. We have seen how Rousseau's and Condorcet's versions of epistemic populism (Sects. 5.5.2–5.5.5) as well as theories of deliberative democracy (Sect. 4.2.5) all try to "solve" Riker's (C)—problem by limiting the domain of preferences (or judgments). Pluralism alone does not opt for this solution. This is in accordance with the spirit of the social choice tradition. Qizilbash (2007) argues that Arrow's classic *Social Choice and Individual Values* contains a strong commitment to political pluralism, and this commitment motivates Arrow's non-dictatorship, non-imposition and universal domain conditions. According to Arrow these conditions "express the doctrines of citizens' sovereignty and rationality in a very general form, with the citizens being allowed to have a wide range of values" (Arrow, 1951/1963, 31). For those who share Arrow's commitment to pluralism, all the attempts to solve the social choice problems by limiting the range of values appear as problematic.

This type of pluralism seems to provide solutions to some classical problems of majoritarianism discussed in the previous chapters. First, switching majority coalitions ensure that there are no permanent losers. Thus, a pluralist democracy guarantees some equality of outcomes. Second, political compromises provide at least

some possibilities to take different intensities (or priorities) into account. Thus pluralism solves or at least mitigates the two-sided problem of democratic minorities. Because minorities have some hopes of becoming a part of a future majority coalition, they have some rational motives to obey the majority decisions. And finally, *post-decisional opposition* (cf. Sect. 5.5.5) is vindicated because democratic compromises are not supposed to be "right", "correct", or optimal in any strong sense; they belong only to the set of rationally acceptable outcomes.

6.2 Pluralism and Compound Majorities

6.2.1 Ostrogorski and Anscombe

The majority principle is ambiguous in more than one way. In his classical study, Dahl (1956, 127) commented: "We can rarely interpret a majority of first choices among candidates in a national election as being equivalent to a majority of first choices for specific policy". Another influential theorist, Anthony Downs, remarked how in multi-party systems "each vote supports a party which will have to compromise its policies even if elected; hence the policies of this party are not the ones which a vote for it actually supports" (Downs, 1957, 147). In order to see the full consequences of the ambiguity, let us consider the following hypothetical story:

> One day, pollsters put the following question to a representative sample of the citizens of a country: 'Are you satisfied with most of the political decisions recently made on the most important issues?' The results of the poll showed that 60 percent of the people were satisfied. 'A Clear Majority Supports Us' boasted the Prime Minister in the press. Two days later, however, the results of another opinion poll (made with the same sample) were published. According to the latter, there was a general agreement among the citizens that the most important issues recently decided on concerned foreign policy, economic policy and environmental policy. The results of the latter poll also showed that 60 percent of the people opposed the decisions made by the Government on the most important issues. The commentators were perplexed by these seemingly contradictory results. Thus, one commentator sneered at the citizens' irrationality ('the only clear conclusion which can be drawn from these contradictory results seems to be that some part of the electorate do not understand simple questions'), while another commentator explained knowingly how 'politics in modern society is a matter of images; the positive image of the present Government makes it acceptable to the voters, even if they are actually dissatisfied with every concrete decision made'. A third commentator suspected a mistake in one or the other poll; others plainly accused the pollsters of falsifying the results in order to hurt/help the Government, etc.

It is, however, possible that 60 % of the citizens actually *were* satisfied with the most important decisions while there *was* also a 60 % opposition against every important decision. Such a situation exemplifies the phenomenon called the *Ostrogorski Paradox*. The name was introduced—and the phenomenon itself analysed—by Douglas W. Rae and Hans Daudt in two articles (Daudt & Rae, 1978; Rae & Daudt, 1976).

The Ostrogorski Paradox   The following conditions are logically compatible:

  (i) There are more than two issues, and each issue is taken up by each party coalition and every voter has a definite preference on each issue.

 (ii) On each issue there are only two possible outcomes ("yes" = Y and "no" = N).

(iii) The issues are *separable*: independent and non-complementary.

(iv) Each voter picks the party with which he or she agrees on more rather than fewer issues, and his/her vote is uniquely determined by his/her issue-preferences.

 (v) There are two party coalitions (**Y** and **N**), and each of them takes a distinct stand on each issue.

(vi) Party coalition **Y** takes the view of the electoral majority on *every* issue and party coalition **N** takes the minority view on *every* issue. Nevertheless,

(vii) **N** wins the election by a clear-cut majority.

An example, using five voter groups and three issues looks like this:

Example 6.2

Groups	Issues			Party supported
	(1)	(2)	(3)	
A	Y	N	N	**N**
B	N	Y	N	**N**
C	N	N	Y	**N**
D	Y	Y	Y	**Y**
E	Y	Y	Y	**Y**
Majority	Y	Y	Y	**N**

For simplicity's sake, let us suppose that the groups, from *A* to *E*, are of equal size (20 % each). In the example, party coalition **Y** offers a platform *YYY*—"yes" on all issues—and party coalition **N** offers the opposite platform *NNN*. Because the latter platform satisfies the preferences of a majority of the voters in a majority of issues, it also gets a majority in the parliament. Nevertheless, on every issue, a majority of the voters opposes the alternative offered by **N**.

What is the relevance of this paradox for the philosophy of democracy? There is some discussion on the normative relevance of the Ostrogorski Paradox—though often not under that heading (see Budge, 1996, 143; Dummett, 1997, 31–33; Lively, 1975, 15–16; Offe, 1985, 275–277)—but generally it has not aroused much attention among political theorists. However, it seems to have important implications. *Prima facie*, it provides a powerful argument against representative democracy in general and against the party system in particular. The result in each issue is against the will of the majority on that particular issue. The message of the Paradox seems to be that, in a representative democracy, parties and agreements between parties tend to pervert the will of the majority; it is no accident that Rae and Daudt have connected the paradox with the name of Moisei Ostrogorski, one of the most virulent critics of modern party politics. Claus Offe, in his early analysis of the Paradox, relates it to "'the political oligopolist' tendency in the party system which

leads to factual and/or legal limitation of entry into the political market place" and also to "the qualitative transformation of political parties into platforms and 'peoples parties' which neither seek nor are in the position to relate the issue-specific alternatives they offer to a stable 'red thread' of a political theory" (Offe, 1985, 277). A related critique of the party system and of political vote-trading is made by Michael Dummett in his *Principles of Electoral Reform* (1997, 31–33). The example analysed by Dummett is an instance of the Ostrogorski Paradox. In the example there are four parties and three motions. One party favours the first two motions, but not the third; another favours the first and the third but not the second; and a third party favours the second and the third, but not the first. The fourth party opposes all the motions, but the three first parties together command a majority in the legislature. If the three parties collude and vote for all the motions, they are all accepted, while if the parties vote separately, they all fail. Dummett comments:

> It is obvious that the outcome of a vote is more likely to be the expression of the general will if all who participate in it vote according to their true opinions than if some, in collusion with others, vote contrary to their true opinions. (. . .) To the extent that the members' true opinions were a sound guide to what would have been for the best, or to what the electorate desired, the collusion converted the best possible outcome into the worst possible outcome; but those who engaged in it could congratulate themselves on a skilful piece of political manipulation. This, in miniature, is the purpose of political parties. (Dummett, 1997, 31–32)

However, the Ostrogorski Paradox may arise in *any* form of representative democracy, not only in the systems dominated by independent party machines. It cannot, for example, be prevented by making representatives directly accountable to their electors. Suppose that the opinion groups *A*, *B* and *C* in our Example 6.2 are homogeneously distributed among the constituencies of every representative of the **N**-party (or, as in Dummett, in of three separate parties). Then, a two-thirds majority of voters in the constituencies of every representative of the **N**-party supports the "no"-policy on every issue. Even if the electors could give binding instructions to their representatives, thus making the party platform irrelevant, *NNN* would still be the outcome of a series of choices made by the representatives. Devices such as popular consultation, intra-party-democracy, recall, or even imperative mandate (Sect. 2.1.3), do not remove the Paradox. Ultimately, the problem is that the majority of a majority is often a minority in the entire society.[13]

When issues (1)–(3) are voted on an *issue-by-issue* basis rather than as packages the problem disappears: the combined set of majority-outcomes is YYY. So the

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[13] *All* the compound majority paradoxes could be avoided by using a 3/4-supermajority rule (Nurmi, 1998a, 344). The double-counting of majorities which is responsible for all the compound majority paradoxes is harmless if the required majorities are sufficiently large. This result does not, however, constitute a serious argument for the use of qualified majorities outside constitutional contexts for, as we have seen (Sect. 2.2.2), qualified-majority rules must be either non-decisive or non-neutral. In the Anscombe case, for example, the use of qualified majorities simply ensures that the majority frustration which was supposed to make the situation "paradoxical" is bound to emerge.

problem seems to be about combining separate issues into one single decision. How could we enforce a rule against such packages? The obvious remedy for the problem is *referendum democracy*. *Prima facie*, the majoritarian case for referenda is strong.[14] A further examination shows, however, that there is, again, a trade-off between different aspects of democracy. We may start by noticing that the Ostrogorski Paradox is conceptually related to the paradox of cyclical majorities. Both the Condorcet paradox and the Ostrogorski paradox may be described as situations in which the notion of "majority will" is ambiguous. In the Example 6.2, as in the standard cyclical case, every individual outcome is opposed by *some* majority. This intuition may be rendered in formal terms. It can be shown that *if a situation is of the Ostrogorski type, then the preferences of the voters over platforms are cyclical*—i.e. *a Condorcet paradox appears*. Rae and Daudt show this in their article (Rae & Daudt, 1976, 395–396; for a more technical treatment, see Bezembinder & van Acker, 1985). In the example above, it can be demonstrated in the following way. The **N**-party could (as in Dummett's version) be treated as a coalition of three groups, A, B, and C, who jointly prefer the combined outcome NNN to the issue-by-issue majority outcome YYY. However, the minority coalition of D and E could break the coalition supporting YYY by offering to any of its three members a more satisfying combination (YNN, NYN or NNY). Any members (of A, B or C) excluded from this new coalition could, again, break the coalition by offering to D and E an even a better combination in which they could have their will in two issues out of three (YYN, YNY or NYY). Then, one of the now excluded members could propose the adoption of the initial combination YYY—which, however, could again be beaten by NNN etc. The collective preferences form the following cycle:

$$YYY > (YYN \sim YNY \sim NYY) > (YNN \sim NYN \sim NNY) > NNN > YYY$$

The close connection between the two paradoxes indicates that no paradox-free majoritarian solution is likely to exist. Suppose that there is, as in the Example above, a situation in which there are at least three issues to be decided on, and several groups with distinct preferences. None of the groups can form a majority alone. The opinions are distributed as in Example 6.2. In this version, however, *all issues are voted on separately by the simple majority rule*. In every issue, there are only two alternatives, and on every issue there is a clear majority for one alternative. There are neither general platforms nor negotiations. In such a situation, the opinion polls would give a reversed result: a majority of the citizens agrees with every decision, but, simultaneously, *a majority of the citizens complains that most decisions are made against their will*. This is the *Anscombe Paradox* introduced by the moral philosopher Elizabeth Anscombe in two articles (both republished in

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[14] For example, in 39 % of the referenda which took place in Switzerland between 1848 and 1990, the majority among the voters was different from the majority in Parliament. Sometimes, the outvoted Parliament was almost unanimous (Frey, 1994).

Anscombe, 1981). The situation in the Anscombe paradox cases is exactly the same as in the Ostrogorski paradox cases, except that the issues in the Anscombe cases are voted on separately, while in the Ostrogorski cases they are combined. If we look at Example 6.2, we see that separate voting on issues 1–3 produces the combined outcome (*NNN*), but that the majority of the voters (consisting of the groups *A*, *B* and *C*) are dissatisfied with the decisions on two issues out of three.[15] If the Ostrogorski paradox is avoided in a direct democracy, the Anscombe paradox raises its head. Thus, we may say that representative democracy is vulnerable to the Ostrogorski paradox, while direct democracy is vulnerable to the Anscombe paradox. The problem is to choose between satisfying the majority of the voters in every issue and satisfying the majority of preferences of the voters.

In the quotation above, Michael Dummett contrasts "the true opinion" or "the general will" with "collusion" and "manipulation", and puts the blame on political parties. Parties are, according to him,

> in essence conspiracies in accordance with which their parliamentary representatives agree to vote in unison in order to make more votes go as their individual members wish than would happen if everyone voted according to his true opinion (p. 31).

However, Dummett overlooks the mechanics of the Ostrogorskian setting. First, as we have seen, a similar problem may appear without logrolling, and even when every representative is strictly bound by the opinion of a majority of her constituents. Thus, the blame cannot be put only on the party system. Second, in a sense, many voters who vote for a candidate or a party behave just like Dummett's representatives. We are not likely to agree with our favoured candidate or party on every possible issue. I may choose a candidate because her opinions in environmental issues and economic issues are similar to mine, while knowing that in issues related to religion—which I consider of less importance—I may well disagree with her. My neighbour who disagrees with me on environmental and economic questions may nevertheless vote for the same candidate just because of the candidate's opinions on religion. Together my neighbour and I may produce an Ostrogorskian effect, without any explicit collusion between us. Sherman J. Clark (1998) argues that this is actually the very point of choosing representatives: by voting a candidate with a particular programme, my neighbour and I are able to express, not only our preferences, but also our political priorities.

The bad reputation of logrolling derives partly from the US experience. The combination of large-scale federalism, lack of party discipline, and single-member constituencies tends to make the representatives dependent on local interests and encourage vote-trading in its simplest form, as exchange of particular benefits. Against this, it should be emphasized that negotiations and compromises on wider issues are an unavoidable element of *any* form of representative democracy.

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[15] However, Nurmi (1998a, 343) has remarked that there are cases which produce the Anscombe paradox but not the Ostrogorski paradox, and vice versa. Although both are paradoxes of compound majorities, essentially produced by the double application of the majority relation ("majority of issues" vs. "majority of voters"), they are not exactly mirror-images of each other.

In multi-party systems, they are necessary in the process of forming coalition governments. In two-party systems, they enter to the picture when the party platforms are created and revised. Parties are themselves coalitions between different groups. Quite often, cooperation between parties and groups takes a tacit form. For example, they refrain from making and supporting proposals which would embarrass or divide their coalition partners. Politics entirely without open or tacit intentional cooperation between parties and groups is not thinkable even as a regulative ideal. Compare this with the discussion of Dowding and van Hees on "sincere" versus "insincere" forms of strategic voting (Sect. 4.3.5). By definition logrolling is a form of strategic voting: voters vote against their true preferences in one issue in order to get a better outcome in another. Both logrolling and "sincere" strategic voting (e.g. voting the second best in plurality elections) could be seen as forms of compromise. The critique of logrolling seems to imply that, in politics, compromises are always dishonest.

As Anscombe herself remarks, her paradox can be seen as an instance of the ambiguity of the utilitarian formula, "the greatest happiness of the greatest number". More generally, the Anscombe paradox shows a problem in all attempts to justify democracy by arguments based on the maximization of *some* aggregated value. For example, Keith Graham (1982) tries to extend the Kelsenian argument (Sect. 6.1.2) for the majority principle by arguing that *direct* majoritarian democracy maximizes citizens' autonomy because it minimizes the number of those citizens who have to submit to decisions made against their will. The Anscombe paradox shows that while direct democracy minimizes the *instances* of such submission, it needs not to minimize the *number* of persons forced to submit. Thus, the Paradoxes are potentially relevant for both the autonomy-based and the utility-based justifications of democracy. At a very general level, the paradoxes of Ostrogorski and Anscombe represent two opposite problem which may arise within a pluralist system, depending on the way issues are decided. The remaining parts of this chapter explain the consequences of this dilemma.

6.2.2 Compromises and the Paradox

In the original version of the Ostrogorski paradox, each voter votes the party or coalition with which he or she agrees on more rather than fewer issues. Therefore, the N-party (or coalition) receives a majority although a majority of the voters opposes the alternative offered by it on each issue. Let us consider a modified version of the Paradox (see also Lagerspetz, 1996; Rae & Daudt, 1976, 393–394). In this modified version each voter decides on the basis of only *one* issue, of which they consider so important that their preferences on this issue override disagreements on other issues; instead of the utilitarian-sounding "preference intensities" we may speak about voters' political *priorities*.

In the example, there are three groups, two issues and two competing platforms: **N** (= "no" in both issues) and **Y** (= "yes" in both issues). The underlined issues are of special importance for respective groups:

Example 6.3

Groups	Issues		Platform supported
	(1)	(2)	
A	*Y*	*N̲*	**N**
B	*N̲*	*Y*	**N**
C	*Y̲*	*Y̲*	**Y**
Majority	*Y*	*Y*	**N**

In this version, issue (2) is the important one for *A* and issue (1) for *B*, while for *C* both are of equal importance. Thus, the majority in the paradoxical case consists of the coalition {*A,B*} implementing the platform *NN*. This combined outcome goes against the will of a majority on both issues. However, the following table shows that there is, as in the initial Paradox, a cycle in the set of logically possible platforms:

A	$YN > NN > YY > NY$
B	$NY > NN > YY > YN$
C	$YY > (YN \sim NY) > \mathrm{NN}$

It is easily seen that *NN* beats *YY*, *YN* and *NY* both beat *NN* while *YY* beats *YN* and *NY* in pairwise majority-voting. Suppose that the voter groups are organized parties (or interest groups working inside parties). Because of the priorities of voters, the parties have a motive to trade votes and make agreements. The relevant notion of 'importance' or 'priority' does not presuppose interpersonal comparisons (*contra* e.g. Hoevenkamp, 1990 or Stearns, 1994, 1284). We may say that for one group, a specific issue is more important than another one, while for some other group they could be of equal importance. If there are more than two issues, we may also say that for a certain group, a specific issue is as important as all the remaining issues together. Thus, we have a measure of *relative* intensities. But these statements do not imply anything at all about the *inter*personally comparable importance of the issues as measured on any *absolute* scale. Nevertheless, vote-trading violates Arrow's independence condition: It violates the *ordering aspect* of the condition because negotiation parties utilize information which goes beyond ordinal rankings. It also violates the *irrelevance aspect* of the condition, for the choice between two options pertaining in one issue is made dependent on the choices made in other issues (Ng, 1979, 125; cf. Sects. 3.3.1 and 4.3.1).

The situation depicted in Example 6.3 is *exactly* the situation of "rule by intense majorities" presented by Dahl in his classical pluralist treatise (Dahl, 1956, 128). So Miller (1983) is right: there is a theoretical connection between the pluralist interpretation of democracy and the "instability" resulting from majority cycles. An empirical example borrowed from van den Doel (1979, 87–90) illustrates the

mechanism of combining issues. At the beginning of the twentieth century, the three dominant political groups in the Dutch politics were the Liberals, the Socialists and the Christian Democrats. The two most important issues in those times were the introduction of universal suffrage and the question whether confessional (Christian) schools should enjoy the same financial support as state-run schools. The Christian Democrats were strongly for the financial equality of schools but doubtful on the suffrage issue. The Socialists were passionate defenders of universal suffrage but mainly against the equal rights of special schools. The Liberals were mildly against both. In 1915 the van der Linden cabinet set up a 'Conciliation Commission' to advise on both issues. It recommended both a universal suffrage and equal financial support for all schools. In 1917 the both proposals were combined as a 'historical compromise', which was accepted in the Parliament with the votes of the Socialists and the Christian Democrats.

Example 6.4

	Issues		
Groups	Universal suffrage	Equal rights for schools	Share of seats in Parliament 1917[a]
Socialists	$\underline{Y}$	N	16 %
Christians	N	$\underline{Y}$	46
Liberals	N	N	38
Majority	**N**	**N**	

[a]Adopted from Nohlen (1969), p. 866

Here we have a case similar to that in Example 6.3: two intense minorities, the Socialists and the Christian Democrats, are combined to form a majority supporting the combination YY which enjoys a 62 % support. If the two proposals were voted on separately, *both* proposals would have failed (by 84 and 54 %).

The paradox can be strengthened further: we can easily construct a situation in which a platform (*NNN*) is accepted *unanimously*, while each of its components, when voted on separately, is rejected by some majority:

Example 6.5

	Issues			
Groups	(1)	(2)	(3)	Platform supported
A	Y	Y	$\underline{N}$	**N**
B	Y	$\underline{N}$	Y	**N**
C	$\underline{N}$	Y	Y	**N**
Majority	Y	Y	Y	**N**

In this case (1) is supposed to be the most important issue for *C*, (2) for *B* and (3) for *A*. When the issues are treated separately, the outcome is *YYY*—a Pareto-suboptimal combination unanimously rejected by all the voters. This is, in a sense, an extreme form of the majority frustration present in the Anscombe Paradox: *All* voter groups would benefit from a mutually agreed compromise.

Compromises have an important role, both in the proto-pluralist theories of Constant and Kelsen and in the modern pluralist theories of Dahl and Bellamy.

All these authors (including Dahl in his later writings) argue that a political compromise is more than just vote-trading. Besides bargaining and exchange of promises and threats, it also involves persuasion and argumentation which may actually change the preferences of the parties. The moral of the Example 6.5 is that compromises need not to be "unprincipled". It is probable that both the Socialists and the Christian democrats saw their favourite issues as matters of principle, as essential parts of the common good, while the other issue was seen as less relevant. And, whatever we think about religious education, at least all democrats agree that it was a good thing for the Dutch to get their voting rights. Probably it was also better that they got their rights through a compromise rather than through a violent struggle.

It is part of the pluralist wisdom that democracies are ruled by several, overlapping majorities, not by a single homogenous majority. One factor which may weaken the legitimacy of democracy is the existence of permanent minorities, that is, minorities which always remain on the losing side in issues they consider as important. It seems that some amount of majority dissatisfaction is necessary in order to avoid the existence of permanently dissatisfied minorities. If the same voter groups were the winners in every decision, there would be no frustrated majority, but instead an *extremely* frustrated minority.

Some theorists have remarked that logrolling and political agreements may produce Pareto-suboptimal outcomes. Sometimes, parties and interest groups may be forced to make deals in which everyone loses. This paradox is produced by a (reversed) Prisoner's Dilemma logic: if a group refuses to make a deal, the threat is that the others may make their own deal at its expense (Riker, 1982, 157–167; Riker & Brams, 1973). However, the examples provided by Riker and Brams (and repeated in almost every introductory book on public choice) assume that negotiating political groups are able to make only *some*, but not *all* mutually beneficial agreements. If vote-trading is universal, and all the "trading" can be made binding, agreements need not produce a sub-optimality problem. Moreover, the possible sub-optimality of agreements in some contexts is counterbalanced by the fact that in some cases agreements does clearly improves the efficiency of political decision-making, as we have seen. Thus, efficiency considerations do not provide any basis for a general prescription.

The bad reputation of logrolling derives partly from the US experience. The combination of large-scale federalism, lack of party discipline, and single-member constituencies tends to make the representatives dependent on local interests and encourages vote-trading of the simplest form, as exchange of particular benefits. Against this negative, it should be emphasized that negotiations and compromises on wider issues are an inevitable element of any form of representative democracy. In multi-party systems, they are necessary in the process of forming coalition governments. In two-party systems, they enter to the picture when party platforms are created and revised. Quite often, cooperation between parties and groups takes a tacit form. For example, those involved refrain from making and supporting proposals which would embarrass or divide their coalition partners. Politics without open or tacit cooperation between parties and groups is not thinkable even as a regulative ideal.

6.2.3 Complex Majoritarianism

Robert Cooter (2002) argues that there are basically two ways to respond the problem of pluralism:

> Arrow's impossibility theorem and other theorems inspired by it, demonstrate that voting tends to cycle under a large variety of procedural rules. Median and bargain democracy represent two different ways to overcome this instability. Median democracy proceeds by factoring issues into separate dimensions of choice. Voting on each issue separately empowers the median voter. The preferred point of the median voter on each dimension of choice is a stable equilibrium. (. . .) After factoring, the minority on one dimension of choice is seldom the same group of people as the minority on another dimension of choice. Any single person with complicated political views wins on some dimensions of choice and loses on others. In general, factoring issues can dissolve large blocks of citizens and insure that everyone wins some of the time. (pp. 9–15)

In his books *Democracy* (1999) and *Democratic Justice and Social Contract* (2014) as well as in a recent article written with Hugh Ward (Ward & Weale, 2010) Albert Weale has developed a sophisticated defence of "median democracy". He recognizes McGann and van der Hout's argument (Sect. 3.5.4) that political equality is maximized by the combination of proportional representation and the majority rule. However, Weale remarks that there are other democratic values besides equality. One is responsiveness to popular opinion. According to Weale (2014, 176), Arrow's theorem shows that there is an inherent tension between rational coherence and responsiveness to the preferences of those who are voting. In a pluralistic society proportional representation guarantees that several political dimensions are involved in decision-making. In representative systems the decisiveness of elections and the accountability of decision-makers are essentially connected to the more basic responsiveness requirement. Because proportional representation tends to create multiparty-systems and to increase coalitional instability, "there is in-built conflict between giving equal power to different parliamentary groups, making the collective responsive to their preferences, and securing the coherence of those collective choices over time" (Weale, 2014, 173). This might constitute one argument for the Westminster system (p. 172)—as in Pettit's theory (Sect. 5.6.2). However, instead of supporting Pettit's argument, Weale argues for the superiority of a certain form of majoritarian democracy termed by them as "rule by majorities" (rather than "majority rule"). Their pluralist intent is clearly articulated in the introductory passage of the article:

> Since the majority of any one issue need not be coextensive with the majority on any other issue, there is no cohesive group governing the determination of outcomes (Ward & Weale, 2010, 26).

While Weale's book (Weale, 2014) is based on a contract theory, in their article Ward and Weale combine the contractarian approach to democracy with an "axiomatic" approach. The argument is that—given specific pre-conditions—rational contract parties who are committed to some weak normative principles would accept only a specific form of democracy. Unlike Nicholas Miller, Ward and

Weale assume that the domain of choice is strictly constrained. They suppose that voters' preferences can be decomposed so that (1) over any single issue-dimension, preferences are single-peaked, and that (2) over several issue-dimensions, preferences are *separable*. The last property is crucial. It can be defined in the following way. Suppose that a and b are alternatives pertaining one single issue, and X and Y are sets of outcomes of decisions made in some *other* issue (or issues). A voter's preference $a > b$ is said to be separable if the following holds for that voter: $(a, X) > (b, X)$ if and only if $(a, Y) > (b, Y)$ for all X and Y. Hence, separability is, in a sense, a conceptual relative of Arrow's independence condition (Sect. 4.3.1). The latter requires that the choice between two options a and b is not dependent on other options related to the *same* issue, while the former requires that voters can choose between a and b without knowing the content of the decisions made in *other* issues. If single-peakedness and separability along political dimensions are assumed, preference cycles can arise only when several dimensions (that is, several issues) are combined in one single decision. Given the assumptions, preference cycles cannot arise when all issues are voted on separately.[16] (Looked from this angle, the separability requirement is a domain-constraint like single-peakedness.)

   In the "axiomatic" part of their argument Ward and Weale argue that the requirement of *equal* and *effective popular participation* implies May's conditions of (i) decisiveness and of (ii) anonymity. Their responsiveness condition (iii) is weaker than that used by May. The justification of these "axioms" is similar to that given in Sect. 2.2.1 for May's original conditions (Notice that Ward and Weale do *not* suppose May's weak neutrality at this stage of the argument!). Further, according to Ward and Weale, political equality implies that the method of decision-making should be (iv) *immune to strategic voting*. The authors show that any rule satisfying these requirements must be a so-called *percentile method* (or, to use another term, a quota rule). This means that the acceptance or rejection of a proposal must depend only on the relative numbers of voters supporting or opposing that proposal. Because decisiveness, anonymity and immunity to strategic voting exclude all methods requiring fewer than 50 % for acceptance, a percentile method must, in effect, be a version of—simple or qualified—majority rule. Hence, the "axioms" (i)–(iv) limit the number of *prima facie* acceptable decision-rules without yet singling out one preferred rule.

   After delimiting the range of acceptable rules to the versions of the majority principle, Ward and Weale apply their contract argument. They argue that behind a veil of ignorance, self-interested voters who are committed to effective political equality embodied in the "axioms" (i)–(iv), and who have separable and single-peaked preferences, would necessarily agree on a particular percentile method, namely the rule of "issue-by-issue median". In other words, they would un-animously choose the *simple* (absolute) *majority rule applied separately on*

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[16] In their article, Ward and Weale use the spatial framework and treat the dimensions as continuous. However, it is not necessary for their argument, and in his book Weale (1999) does not use it. Here, I follow the latter policy.

each issue as their decision-method. This part of Ward and Weale's argument is actually a generalization of the result proved by Douglas Rae (1969) and sketched above as an interpretation of Kelsen's earlier and less precise argument (illustrated by the Example 6.1). In Rae's initial version, as well as in Ward and Weale's generalized version, the contract parties are trying to maximize their personal gains—or to minimize losses—behind a veil of ignorance. The result, illustrated by the Example 6.1 above, shows that the closer a rule is to the simple majority-principle, the smaller are an individual voter's expected losses. Thus, behind a veil of ignorance, self-interested choosers would unanimously accept the simple majority principle. Ward and Weale generalize this kind of argument to multi-issue contexts. Given the single-peakedness of preferences over individual issues (trivially true in dichotomous cases), the issue-by-issue majority rule picks the Condorcet winner in each issue. There is a well-defined "will of the People" in *each* separate issue, even if there need not to exist a majority-preferred *combination* of issues. Moreover, given separability and single-peakedness over each issue-dimension, *if* there is a set of Condorcet-winning combinations, the combination of the choices made issue by issue is necessarily in such a set (Weale, 1999, 135–136). To summarize:

> Over time, the content of laws is given by the sum of those propositions that have been able to secure majority support on each occasion. Since the majority of any one issue need not be coextensive with the majority on any other issue, there is no cohesive group governing the determination governing the determination of outcomes. Each issue is decided by a majority; different majorities decide the sum of all issues on which citizens vote directly. This society uses a method of decision making we call majorities rule. (Ward & Weale, 2010, 28)

The authors characterize their approach as "rights-constrained welfarism, where the axioms help define political rights" (p. 38). Weale argues that "the paradoxes of social choice need not incline us towards the anti-populist liberal end of spectrum in the way that Dahl, Riker and Runciman suggest" and concludes that "the-issue-by-issue median is the best approximation we shall have to a popular will" (Weale, 1999, 147). Riker's problems (A)–(D) are thus avoided. It is important to see how the result is achieved. The essential thing in the solution is to keep the issues separate. If the voters were allowed to combine different issues, instability and manipulation would return. Ward and Weale admit that some other collective choice functions might in the spatial context achieve even lower expected losses than the issue-by-issue majority rule.[17] However, these choice functions do not satisfy all the axioms (i)–(iv). Typically they violate axiom (iv) because they are not strategy-proof. Such methods are ruled out because when making the constitutional choice, the hypothetical choosers behind the veil of ignorance are already

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[17] Sugden (1981, 140–145) provides a similar contractarian-utilitarian argument for the Borda rule (and against majority rule, p. 147). His argument is based on the explicit assumption that voters do not vote in a strategic way.

committed to the principles of effective and equal participation embodied in the
axioms, including the axiom (iv).

As Ward and Weale indicate, the most plausible institutional realization of their
"majorities rule" is a referendum democracy. How else could a rule against the
combination of different issues be enforced? No general ban on vote-trading would
be effective, for tacit agreements within or between organized political groups can
be made informally, or even without any explicit communication at all. Such a tacit
collusion is a common phenomenon in our daily lives. Direct mass democracy
seems to be the only way to make logrolling and similar practices impossible. When
voting is secret and the number of participating individuals is large, political groups
have no effective way to monitor and discipline the behaviour of their supporters.
Hence, binding agreements are usually not possible. Cooter (2002, 9) explains
"Median democracy requires voting on one issue at a time. Consequently, imple-
menting median democracy requires raising transaction costs of combing multiple
issues, whereas facilitating bargain democracy requires lowering the transaction
costs of combining multiple issues." "Transaction costs", that is, the sheer number
of independent decision-makers, effectively prevents the emergence of strategic
cooperation in referenda.[18] In a sense, this argument for direct democracy is the
exact opposite of Pettit's argument. For Pettit, referendum democracy fails to reveal
any meaningful "will" *for the very reason* that cooperation between voters is
impossible (Sect. 5.6.2).

6.2.4   The Multiple Elections Paradox

Have Ward and Weale really solved Riker's problems by finding the best approxi-
mation of the popular will? On possible criticism might be based on the so-called
Paradox of Multiple Elections (or of Divided Government) introduced by Brams,
Kilgour, and Zwicker (1998). The "paradox" is the following. Suppose that refer-
enda are arranged on several issues (or, in an alternative interpretation, that there
are several offices to be filled by elections). In every issue, there are only two
choices: "yes" (Y) and "no" (N) (or, in elections, there are only two candidates, say
a Republican and a Democrat, running for each office). While in every separate
referendum or election there is an absolute majority behind the winning alternative
or candidate, the resulting *combination* of outcomes may have very few supporters.
Indeed, it is logically possible that *no* voter has cast her or his votes for that
particular combination. The basic paradox is illustrated by the following example:

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[18] A similar approach is taken by Ian Budge (1996) although he does not use Ward and Weale's
sophisticated strategy of justification.

Example 6.6

Voters	Issues		
	(1)	(2)	(3)
A	N	Y	Y
B	Y	N	Y
C	N	N	N
Majority	**N**	**N**	**Y**

In this example, there are three issues and three voter groups of equal size. The winning combination when all the issues are decided on *simultaneously* is *NNY*, although it is not the most-preferred alternative for any single voter. Moreover, we may construct examples in which the combined outcomes need not even be close to any voter's favourite combination. It can be shown that the combined result of several simultaneous referenda need not be in accordance with any voter's opinions in more than the half plus one of the issues. If, for example, 30 issues are voted on, it may happen that *no* voter agrees with the combined outcome of the decisions on more than 16 issues (Scarsini, 1998). To take a concrete example of the Paradox, consider the US election results in 1980. The elections produced a Republican President, a Senate controlled by Republicans, and a House controlled by Democrats. Some voters certainly supported this particular combination, so it was not, strictly speaking an instance of the paradox illustrated by Example 6.6. However, only 14.3 % of voters opted for this particular combination; of all possible combinations, it was only the fourth most popular.

How paradoxical, in fact, are these results? Although the situation depicted in Example may look counter-intuitive, it is actually not deeply disturbing. After all, in the Example the "paradox" consists of the fact that although the combination *NNY* results from majority decisions, no-one is completely satisfied with it. But isn't that the normal situation in democratic decision-making? If the issues are perceived as independent from one other and if the intensities are equal—as Ward and Weale assume in their article—the winning combination (*NNY*) may be considered a reasonable democratic compromise. Although it is not the most-preferred combination for any single voter group, it is necessarily in the Condorcet- winning set of combinations, *if* such a set exists. Every voter group agrees with two decisions out of three. If all the issues are of equal importance for all voters, the winning combination has to be the second best for all.

It may be argued that even if the political combination which resulted from the US elections in 1980 was not the most-preferred alternative for a large majority of voters, it needs not to be conceived as "paradoxical" in any disturbing sense. The US election results are troublesome only if the plurality criterion is taken as the best approximation of the popular will. However, as Weale remarks, there is no guarantee that a plurality-winning option would offer a balanced democratic compromise. The very fact that a Condorcet-winning combination of choices need not be anyone's ideal alternative indicates that it is the alternative around which a majority of people in a community are most able to compromise (Weale, 1999, 134–135). "Divided government" may be compared to the coalition governments which

typically result from PR-elections. Seen in this light, the "Paradox" of Multiple Elections is not more disturbing than the fact that a Condorcet-winning candidate need not be the most favoured candidate of any single voter.[19]

6.2.5 Majorities Rule and the Anscombian Majority Frustration

However, Ward and Weale's "majorities rule" has another, more disturbing aspect. We have seen that if there is a Condorcet-winning combination of choices, the issue-by-issue majority rule chooses that combination. However, suppose that there is no such combination of choices. Indeed, the more there are issues or dimensions, the less likely it is that such a combination exists. If there a cycle—that is, no Condorcet winning combination—nothing guarantees that a combination of separately decided issues is even *Pareto-optimal*. In some cases *all* voters might unanimously prefer another combination to that reached through separate, un-coordinated decisions. Consider the following example. There are three voter-groups (A, B, and C) and three issues. The voters can vote "yes" (Y) or "no" (N) on any issue, and majorities are decisive in each issue. The voters preferences over possible combinations are the following:

Example 6.7

A	B	C
YYN	*YNY*	*NYY*
NYN	*YNN*	*NYN*
YNN	*NNY*	*NNY*
NNN	*NNN*	*NNN*
YYY	*YYY*	*YYY*

(continued)

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[19] Compare with van Deemen's account of proportional representation discussed in Sect. 3.5.6. For van Deemen, the source of his alleged paradox was that the plurality ranking of parties is in no way connected to their Condorcet-ranking. In his "paradoxical" Example 3.24 the Condorcet-winning party receives no seats because it is no-one's favourite. The Paradox of Multiple Elections was considered as "paradoxical" by Brams et al. for the opposite reason: the outcome of separate uncoordinated elections may well be a Condorcet winner, but it need not to be anyone's most preferred combination. Nevertheless, the Paradox of Multiple Elections has some interesting implications. Morris P. Fiorina compares a divided government in a two-party system—for example, a situation in which the Democrats control the Presidency and the Republicans control the Congress—a coalition government in a multi-party system. According to him "the option of splitting their ticket in a separation-of-powers system enables voters *to vote directly for the coalition they most prefer*—thus eliminating some of the disparity between expressing a preference and contributing to the selection of a government" (Fiorina, 1995, 242; emphasis in the original). However, the Paradox of Multiple Elections reveals a further similarity between multiparty systems and systems with a strong separation of powers: the particular winning coalition may in both types of systems be only the second-best option for almost all voters.

A	B	C
NYY	*YYN*	*YYN*
YNY	*NYY*	*YNY*
NNY	*NYN*	*YNN*

The preferences over combinations are cyclical: there is no single Condorcet-winning combination. (Notice, however, that the preferences are separable.). Separate, uncoordinated majority decisions on each issue produce the combination YYY. However, all the voters think that the combination NNN is to be preferred to YYY. Özkal-Sanver and Sanver (2006) have shown that if there are more than two separately resolved issues, *no anonymous voting rule is Pareto-ensuring*, not even when the preferences are separable. In other words, if we add the Pareto (or unanimity) condition to the axioms accepted by Ward and Weale, we get an impossibility result (Ward & Weale, 2010, 41).[20]

In a sense, such a result is to be expected. Remember that Ward and Weale characterize their approach as "rights-constrained welfarism". From Amartya Sen's Paretian impossibility result and from its generalizations we have already learned that decision-rules which combine rights with welfarist principles are typically incompatible with the Pareto-principle (see Sect. 4.2.2). One proposed way out from Sen's impossibility result was that individuals should be allowed to make enforceable Pareto-improving contracts. There is a clear analogy: if voters could combine various issues and vote them as packages rather than separately, the outcomes might differ from those accepted in separate referenda. For example, in the Example 6.7 voters would unanimously accept a move from YYY to NNN. In Ward and Weale's theory, the issue-by-issue rule is designed precisely in order to *exclude* such agreements. While Sen justifies the rejection of unanimity (in certain contexts) by the primacy of individual rights, Ward and Weale justify their similar rejection by appealing to their contractarian methodology:

> Within the contractarian tradition of theory, a clear distinction is made between decisions at the contractual or constitutional stage and decisions within existing political institutions. Imposing unanimity as an axiomatic requirement on the collective choice rule is to say that the rule should respect that requirement on all occasions. Yet, since this requirement conflicts with other desirable axioms, a constitutional choice has to be made. We cannot assume that the attractiveness of unanimity at the constitutional stage carries though to an axiomatic requirement on voting rules within a constitutional framework (Ward & Weale, 2010, 41).

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[20] Pareto-suboptimality can be avoided if the preferences are further restricted. Suppose that the voters see all the issues as equally important, so that the value of a combination for a voter depends only on the number of issues in which the outcome agrees with her own view. For example, in the Example 6.2, voters' preferences are the following. A: YYN > (NYN ~ YNN ~ YYY) > (NNN ~ NYY ~ YNY) > NNY;   B: YNY > (YNN ~ NNN ~ YYY) > (NNN ~ YYN ~ NYY) > NYN;   C: NYY > (NYN ~ NNN ~ YYY) > (NNN ~ YYN ~ YNY) > YNN. The combination YYY resulting from issue-wise decisions is Pareto-optimal.

However, the last sentence in the quotation is ambiguous. The contractarian argument shows why the hypothetical contractors would subscribe Rousseau's famous dictum that "apart from this primitive contract, the vote of the majority always binds all the rest" (Rousseau, 1762/1973, 250). Behind the veil of ignorance, the contractors would not accept a decision-rule which invariably *requires* unanimous decisions. However, that is not enough. Example demonstrates that the axioms (i)–(iv) commit the contracting parties to a decision-rule which may fail to respect their unanimous will even when they happen to have one. If a unanimous will is a necessary condition for legitimacy at the constitutional stage, can it be *totally* ignored at the post-constitutional stage? This consequence seems to violate one of the background values motivating Ward and Weale's axioms: "Rule by the people, if it is to be democratic, has to mean the making of laws and policies that is in some way *responsive to the views of individuals* subject to those laws and policies" (Ward & Weale, 2010, 29; my emphasis). To put my argument in a slightly different way, the voters themselves may unanimously agree on that a compromise-outcome may be better than a series of separate majority decisions, and in a representative system they may be willing to authorize their representatives to negotiate a compromise. The system envisaged by Ward and Weale is *not* responsive to such unanimous wishes of the electorate. Ward and Weale are able to make the axiomatic and contractarian aspects of their theory mutually compatible only by accepting an extremely weak responsiveness condition, a condition which does not even imply respect for unanimous opinions.

6.2.6   Non-separability

When there are several issues to be decided, there are several possible decision-paths. Consider the simplest situation in which there are two issues, (1) and (2), and two choices in each issue ("yes" or "no"). Then there are four ways to arrange (majority) voting. The decision-makers may vote simultaneously on both issues; they may first vote on (1) and after that on (2), or vice versa; or then, they may choose from four different packages ("yes" for both, "no" in issue (1) but "yes" in (2), and so on). Even in a simple case like this, the combined outcome may be determined by the chosen decision-path. Ward and Weale recognize the problem of path-dependence. However, they argue that there are normative reasons to follow a particular path (see also Weale, 1999, 145–146): The issue-by-issue majority rule alone is compatible with their axioms (i)–(iv). Hence it has to be the most egalitarian method. By excluding cycles it eliminates the possibilities of strategic voting which, according to Ward and Weale, is one important source of political inequality (cf. Sect. 4.3.4). In Example 6.7 the combined outcomes form a cycle (actually, several interlocked cycles). In this case, allowing packages leads to potentially infinite vote-trading. It can be prevented only by some external factor—an institutional rule, individual unwillingness to trade, time limit etc.—which may arbitrarily favour some voter(s), thus creating inequalities. In this way, path-dependence and the

resulting possibility of Pareto-suboptimal choices are justified by the democratic values embodied in the "axioms" (i)–(iv).

However, we have already seen that the relation between different democratic values is more complicated than Ward and Weale are ready to admit. It is possible to see a trade-off, not only between unanimity and equality, but between the requirement of the *democratic control of agenda* and political equality embodied in the voting method. From Ward and Weale's single-issue requirement it follows that the decision-makers themselves cannot have an effective control over the agenda. In effect, Ward and Weale's model has to presuppose the existence of an impartial agenda-setter who has the power to enforce the issue-by-issue rule by excluding proposals which combine different issues into packages. Then, Ward and Weale have to face Riker's (E)-problem: What can guarantee that an agenda-setter is impartial and benevolent?

The agenda problem is less difficult as long as citizens' preferences are clearly separable. In the theory formulated by Ward and Weale, however, the separability of preferences is assumed rather than justified. The starting point is that *any* complex decision problem can be broken down into issues which can be put to the vote separately. However, if voters' preferences over some issues *cannot* be broken down in this way—in other words, if they are *non*-separable—a decision made in one issue may effect on voters' preferences in the remaining issues. Consider the simple situation with two issues and two alternatives for each issue ("yes" or "no"). There are four combined outcomes (YY, NN, YN and NY) and 24 possible strict preference orderings. Of these orderings, only one-third, or eight orderings, are separable. If there are three issues, there are eight combined outcomes and 40,320 strict preference orderings. Only 384 of them—less than 1 %— are separable. The separability postulate restricts the domain of choice in a radical way; the preferences ruled out by it need not to be in any sense irrational or unusual. Consider, for example, a voter who sees two proposed projects as complementary: if one is not accepted, there is no point to accept the other: she may have the ordering YY > NN > YN ~ YN. Or, consider another voter who thinks that the projects are mutually independent and, as such, beneficial, but the polity cannot afford both. She would accept either of them, but would rather reject both than accept both: her ordering might be YN > NY > NN > YY. How these voters vote on one issue depends on how the other issue is decided. Complementarities, unequal intensities and budget constraints are obvious reasons behind non-separable preferences. To these reasons, we may add symbolic values and (true or false) beliefs about causal interdependences. Like "dimension" and "issue", "dependence" or "interdependence" of issues are agent-relative and situation-relative properties.

The problem of non-separability can be illustrated with an example (from Lacy & Niou, 2000, 11). Suppose that there are three voters and two issues, say, two projects which have to be accepted or rejected. The voters have the following preferences over the combined outcomes:

Example 6.8

A	B	C
YN	*NY*	*NN*
YY	*YY*	*YY*
NY	*YN*	*NY*
NN	*NN*	*YN*

In the above example, voters' preferences over the issues are single-peaked but non-separable. We can give them a meaningful interpretation. For example, voters *A* and *B* see the projects as competing, and both have their favourite projects. They would rather accept both projects than to abandon their pet projects. Voter C sees the two projects as complementary rather than competing; they should be accepted or rejected together. Because C considers them expensive, she would rather reject both. If the issues in the Example 6.8 are decided *in combination* by pairwise majority voting, combination YY wins: in other words, that combination is the Condorcet winner. Next, suppose that the voters first decide on the fate of the first project and only later on the second. These separate decisions would produce the combined result NY. If the voters should instead take vote on the second project and only after that on the first project, the result would be YN. Finally, if the issues are to be decided *simultaneously but separately*, without any negotiations and log-rolling, the outcome would be NN—an alternative ranked as the last by a majority of the voters. If issues are perceived as interdependent, issue-by-issue majority voting need *not* to select a Condorcet-winning combination.

Ian Budge (1993) objects to examples such as the one above:

> Citizen ignorance and inconsistency are often summed up in the example of a majority of electors wanting tax cuts at the same time as majority want welfare increased. Both alternatives were clearly endorsed by a majority. The original investigators interpreted this as political naivety—how else could welfare be paid but by tax increases? To this modern answer might be: by defence cuts, inflation, joining the European community, and economic growth. There are a lot of strategies, any or all of which might be pursued, but pervasive uncertainty about which might work. Electors are, after all, not so naive.

However, in Example 6.8, no single *voter* is inconsistent or irrational—it is the *process* which produces irrational outcomes. The problem is that issue-by-issue voting (or, for that matter, an opinion poll that presents separate questions to voters) does not allow the voters to choose between meaningful combinations.

We have already seen (Example 6.7) that uncoordinated majority-decisions may produce Pareto-suboptimal combinations. If the preferences are non-separable, simultaneous and uncoordinated majority decisions may even produce an outcome which is not only Pareto-suboptimal but *strongly* Pareto-dominated, that is, un-animously considered as the *worst* outcome. Consider the following example (Lacy & Niou, 2000, 13):

Example 6.9

A	B	C
YYN	*YNY*	*NYY*
YNY	*NYY*	*YYN*
NYY	*YYN*	*YNY*
NNY	*NYN*	*YNN*
YNN	*YNN*	*NYN*
NYN	*NNY*	*NNY*
NNN	*NNN*	*NNN*
YYY	*YYY*	*YYY*

In this example there is no Condorcet-winning combination, for combinations YYN, YNY and NYY form a cycle. It is, however, difficult to argue that in this case the general will is approximated by separate majority decisions. Separate decisions produce the combination YYY—*everybody's* last-preferred alternative! With non-separable preferences, the issue-by-issue method recommended by Ward and Weale cannot be conceived as a plausible "approximation of the popular will"; *any* method that chooses some of the combinations in the top cycle would certainly constitute a better approximation. Nor can the issue-by-issue method be recommended as a way to "minimize dissatisfaction" among citizens (Ward & Weale, 2010, 28); in the example, that method actually maximizes voters' *dissatisfaction* by producing a result which is unanimously considered as the worst of all. The issue-by-issue method has its advertised properties only when separable issues are decided separately *and* non-separable issues either do not exist, or are decided on as combinations.

6.2.7   Issue-by-Issue Decision-Making in Real Life: Single-Subject Rules

Some critics of logrolling and agreements (for example, Michael Dummett and Allen Buchanan) seem to suppose that there has to be the *right* way to combine the issues, to construct the agenda. This is a problematic assumption. But even if we grant this much, logrolling is ethically dubious in a particular case only if the actual agenda presented for the decision-makers is the right one. If issues which should be decided in combination are actually treated as separate issues, logrolling might simply be a means to correct this defect.

The problem of combining or separating issues is not a hypothetical one. Agendas are manipulated by combining issues which are perceived as independent. For example, in the referenda arranged by President de Gaulle, three out of the four proposals submitted to referendum were 'package deals' in that they required answers to two separate questions by a single Yes or No. Thus, the 1969 referendum in France asked for approval of the creation of certain regional institutions and also of a reform of both the composition and functions of the Senate, and the electorate

was given no option of accepting the one and refusing the other. Outcomes can also be affected by separating issues which are actually interrelated. In the famous Californian referendum on a state constitutional amendment (Proposition 13) which sharply reduced property taxes and placed severe restrictions on future tax increases

> almost two-thirds of the voters supported Proposition 13, but 70 percent of the respondents to a Los Angeles Times-CBS News Poll indicated that they did not believe that services would have to be cut. (. . .) Fewer than five percent of the sample indicated that they would be willing to exchange their tax dollars for reduced fire and police protection. (Uslaner, 1981, 147–148)

In real-life referenda, states often try to enforce the-issue-by-issue requirement by so-called single-subject rules. For example, 22 states in the USA use the referendum device in legislative decision-making, and at least 17 of them apply some version of the single-subject rule. In California, for example, the Constitution says that "an initiative embracing more than one subject may not be submitted to the electors or have any effect" (Constitution of California, art. 2 §8(d)). This may be interpreted as an attempt to implement something like Ward and Weale's "majorities rule". The task of the State courts is to enforce the rule by reviewing the initiatives approved in referenda. Thus, the courts possess significant power over the agenda.

Court decisions are often controversial. For example, in 1982 the California Supreme Court had to review Proposition 8, the "Victim's Bill of Rights". According to the court's own summary, the initiative concerned 11 topics: restitution, safe schools, truth-in-evidence, bail, prior convictions, diminished capacity, habitual criminals, victim's statements, plea bargaining, sentencing to the Youth Authority, and mentally disordered sex offenders. By a 4-3 vote (*Brosnahan* vs. *Brown*), the court found that the initiative satisfied the single-subject rule of the Constitution. The dissenting justices argued that the initiative denied the voters an opportunity to vote on its individual provisions (Dubois & Feeney, 1998, 132–133). In Oregon 1996, 59 % of voters approved a somewhat similar victims' rights initiative (Measure 40) that among other things, allowed non-unanimous jury verdicts in murder trials, prohibited unregistered voters from serving on juries, gave prosecutors the power to demand a jury trial, relaxed the immunity law, and restricted a criminal defendant's right to pre-trial release. Unlike the Californian court, the Supreme Court of Oregon decided that the initiative violated the people's right to vote on different constitutional amendments separately (*Armatta* vs. *Kitzhaber*). The supporters of the initiative broke it down into seven different initiatives which were referred to the voters of Oregon in 1999. Three of the seven initiatives—those concerning the jury verdicts, the weakening of the immunity law and the prosecutor's right to insist on a jury trial—were defeated. The remaining four measures passed by roughly the same margin as the initial Measure 40. Thus, a majority of voters was willing to accept the whole package, while rejecting three of its components out of seven (Ellis, 2002, 145–146). These examples remind us that the identity of an "issue" or "subject" is often a controversial matter. In the real life

agendas are contested, and the answer to the question "What is the right agenda?" may *be as controversial and subjective as answers to any questions which might be on the agenda*. As a member of the Supreme Court of California said, "almost any two (...) measures may be considered part of the same subject if that subject is defined with sufficient abstraction" (cited after Cooter & Gilbert, 2010, 690).

There has been some scholarly discussion on the interpretation of single-subject rules. For example, Cooter and Gilbert (2010, 687) argue that courts should separate proposals on the ballot if *most* voters see the issues as separate; they should allow combined proposals if most voters do not have separable preferences. According to Cooter and Gilbert, most voters either have or do not have sufficiently separable preferences over the provisions of a challenged ballot proposition. Thus the question of separateness of the two proposals "has an objective answer". "Whether policy proposals should be separated or combined turns on the preferences of the majority of voters, however slight that majority may be" (Cooter & Gilbert, 2010, 715). In Example 6.8, because the voters have non-separable preferences, they should be allowed to choose between the packages YY and NN. The result would be the Condorcet-winning alternative (YY).

Cooter and Gilbert try to provide a simple democratic solution to the agenda problem: if the agenda is controversial, let us ask the people. There are, however, two problems in this approach. First, their proposed solution does not solve the sub-optimality problem which troubled Ward and Weale's approach. Consider Example 6.7. In the example, *all* voters have separable preferences; hence, according to Cooter and Gilbert, the issues should be decided separately. However, as we just saw, separate decisions would produce a Pareto-suboptimal combination. Second, if only a *minority* of voters has non-separable preferences while the majority sees the issues as separate, issue-by-issue voting mandated by Cooter and Gilbert's requirement may still fail to select the Condorcet-winning combination. This is shown by the following example:

Example 6.10

A	B	C
YY	YN	NY
NN	NN	NN
YN	YY	YY
NY	NY	YN

In this example, a majority of voters (B and C) has separable preferences. Only voter A sees the two issues interconnected. According to Cooter and Gilbert, a court *should* therefore separate the two issues. That would produce the combined outcome YY. However, combination NN is the Condorcet winner. The cause of the problem is the central theme of this chapter, namely the ambiguity of the notion of "majority". The majority which decides whether the issues should be separated needs not to be the *same* majority which decides on the issues. More generally, any majoritarian method to solve the agenda problem may be vulnerable to the further problem of regress. Although Cooter and Gilbert call their criterion as

"majoritarian" it does not really solve the riddle of majority: should the issue-by-issue majorities or the overall majority be decisive?

6.2.8 Conclusion

To summarize the *formal results*: If voters' preferences are separable (there are no complementarities and interconnections between issues) and if there is a Condorcet-winner in *each single issue*, the combination of decisions produced by issue-by-issue majority voting (for example, in a series of referenda) is a Condrcet-winning combination, *if* there is one. If, however, there is no such combination, issue-by-issue majority voting may produce a suboptimal result. Next, suppose that issues are negotiated in packages. If there is a Condorcet-winning combination, it is a stable outcome. In other words, *if* parties are rational and negotiations are centralized, a Condorcet-winning package cannot be overturned in further negotiations (Schwartz, 1977). This is true also when negotiators' preferences are non-separable. By contrast, if some voters have non-separable preferences, issue-by-issue voting need not produce a Condorcet-winning or Pareto-optimal combination.

Finally, suppose that preferences are non-separable and there is no Condorcet-winning combination. In this case issue-by-issue voting may even produce a universally Pareto-dominated combination, that is, *all* voters would see *all* available combinations better than the combination resulting from separate decisions. In this case negotiated solutions have an advantage. Even if there is no Condorcet-winning combination, the outcome cannot be universally Pareto-dominated (of course, no-one would propose such a package); and if negotiations are centralized and the negotiators fully rational, the outcome is within the Pareto-undominated set (McGann, 2006, 137–138). The results are compiled in the following table:

	Issue-by-issue voting	Negotiated combinations
C-winner, separable preferences	C-winning combination	C-winning combination
No C-winner, separable preferences	Pareto may be violated	Pareto not violated
C-winner, non-separable preferences	Pareto may be violated	C-winning combination
	C-criterion violated	
No C-winner, non-separable preferences	Universal Pareto-domination violated	Pareto not violated

On the basis of this summary, one could argue that although all forms of majoritarian democracy are troubled by problem—no surprise for those readers who have had the patience to read this work—a representative democracy which allows mutually beneficial agreements is the less problematic alternative.

We saw how Philip Pettit's version of deliberative democracy eliminated inconsistencies through path-dependence which gives some judgments ("premises") a privileged status. As contrast, pluralist democracy, as envisaged by Constant, Kelsen, Dahl, Bellamy, and Miller eliminates *synchronic* inconsistencies and suboptimalities through negotiations and compromises. It does not try to eliminate all diachronic inconsistencies, for, outside constitutional contexts, decision-makers should not be able to bind themselves or their successors by irrevocable agreements. Kelsen and Dahl argue that in pluralist societies, there are good reasons to let the majorities decide. However, we recognized that the majoritarian ideal is still underspecified: "Majorities" may be popular majorities or elected majorities, majorities counted issue-by-issue or majorities supporting general policies based on implicit or explicit negotiations. Authors such as Ward and Weale (2010), Robert Cooter (2002) and Ian Budge (1996) defend the issue-by-issue majority rule and direct democracy, while Iain McLean (1989), Thomas Christiano (1990, 1993) and Sherman J. Clark (1998) defend bargaining and voting on complex packages—and, consequently—representative democracy.

The starting point of McLean, Christiano and Clark is that an ideally rational and autonomous choice should be made among "total states of world" or "total life prospects". Such an ideal is, of course, unattainable, but it can still have a regulative role. First, we should take into account the undeniable fact that there *are* interdependencies and complementarities, and therefore citizens' preferences are often non-separable. Second, citizens have different political priorities. If citizens cannot have an equal say on each and every issue, they would like to have power over those issues which they see as important. The best way to accommodate these two aspects of citizens' preferences is to allow them to choose between relatively comprehensive political programmes. This argument supports representation, not only as a necessary evil but as a genuine instrument of democracy.

In contrast, Ian Budge argues that a choice between "total states of the world" is not only impossible but also implausible even as an ideal:

> Such a conception of rationality assumes that decision-makers are God, with total knowledge and information about all the determinants and consequences of their decisions. We do not live in the world of unlimited full information, and if we did we might not recognize that we had it and would be overwhelmed by the costs of processing it. (...) Incidentally, the argument also indicates that in case of conflict between majorities on specific issues and overall programmatic majority (...) it would be better to decide discretely on specific policies if one has to make a choice. This is because there is no logical or compelling rational reason to group separate issue-areas together, as we do not know what are the real connections between them. (Budge, 1996, 157–158)

Weale (1999, 147; 2014, 175–176) has a similar critique of "synoptic rationality". Clearly, both sides of this dispute have a point. Budge is undeniably right when insisting that we often possess very little information about the connections between issues. Yet, McLean and Christiano seem also to be right when arguing that whenever we have information about the interconnections of issues, we should be allowed to use it; and quite often we, or hopefully, our representatives, know at least *something* about "the real connections" between issues.

The quarrel is not between "populists" and "non-populists". The opposing views are based on different interpretations of the *shared* democratic values: those of *responsiveness* and of *equality*. While such supporters of direct democracy such as Budge argue (and anti-populists such as Pettit tend to concur) that direct democracy does, in principle, maximize responsiveness, Sherman J. Clark (1998) argues that a representative system may be a *better* approximation of the "populist" ideal of popular control than a referendum-democracy. By allowing political bargaining and logrolling representative democracy—unlike issue-by-issue direct democracy—provides at least *some* means to take citizens' different priorities into account.

Ward and Weale claim that political equality requires issue-by-issue "majorities rule". The supposed link between political equality and issue-by-issue decision-making becomes clearer when we consider a related argument made by Allen Buchanan (1985, 31). According to Buchanan, vote-bargaining or combining several issues is equivalent to giving some individuals more votes than others on an issue by giving them fewer votes on other issues. Hence, vote-trading is against the democratic idea of democratic equality. If such an unequal procedure is accepted in a democratic agreement, it only confirms the old wisdom that democratic procedures can sometimes be used to undermine democracy itself. By trading votes, the representatives actually trade away the principle of democratic equality. How convincing is this argument? When politicians are forced to vote against their conscience because of an agreement made between their own parties and other groups, they may well feel that their right to equal control over all decisions is deprived. But aren't they equally justified in feeling so if they are *not* allowed to make a compromise with others even when they think that a compromise would, all things considered, be the best solution? Christiano (1993) and Clark (1998) argue that there is no trade-off between equality and Pareto-improving agreements. Political equality allows and even requires vote-trading. As Christiano (1993) says:

> We come much closer to an egalitarian conception of the collective decision process if we permit individuals to trade on the resources they have between procedures. This is because vote trading makes it possible for them to use their procedural resources in ways that reflect the complementarity of their preferences and the varying importance that different issues have for them. (*ibid.*, p. 177)

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Chapter 7
Social Choice in the Real World

7.1 The Missing Evidence?

One important theme which emerged in chapters was the confrontation between direct and representative "models" of democracy. In the following chapter I try to show how the trade-offs between various democratic criteria manifest themselves in representative democracies. I shall, however, start with the general sceptical problem.

All the discussion reviewed in earlier chapters has been conducted under the assumption that Riker's (C)-problem and (D)-problem are real possibilities. However, after 40 years of intensive theoretical research, the relationship between the key results of the social choice theory and the empirical research on elections and decision-making procedures is still unclear. As we have seen, many theorists believe that the notorious impossibility results have questioned our most basic beliefs about the nature of democracy At the same time, many political scientists carrying out research in the empirical field tend either to ignore these results altogether or just to mention them in a footnote. So do many philosophers of democracy. Although our review of the social choice results shows that the theory is not only about the possibility of cyclical results—for example, Riker's non-uniqueness argument (A) is entirely independent of it—the most celebrated results are closely related to the possibility that majority preferences may exhibit a cyclical shape.

7.1.1 Spotting the Monster

The burden of proof, I think, lies on the shoulders of the social choice theorists. They have the task of convincing their more empirically and historically-minded colleagues that the highly formal framework of social choice really does have

explanatory power. Consider the question of cyclical majorities or Condorcet para-doxes–Riker's problem (C). The a priori probability of cyclical majorities grows *very* rapidly when the number of alternatives and voters increase. The following table (Gehrlein, 1997) shows the probabilities in an "impartial political culture"— that is, when all preference orderings between alternatives have the same a priori probability:

Voters	Alternatives			
	3	5	13	25
3	0.067	0.160	0.385	0.525
7	0.075	0.215	0.500	0.655
17	0.083	0.237	0.541	0.700
29	0.085	0.243	0.553	0.712
39	0.086	0.246	0.557	0.717
49	0.086	0.248	0.560	0.719

The theoretical prediction seems to be that we are likely to find cycles quite often. For example, in single-member elections it is quite common to have five candidates running simultaneously. According to the table, every fourth five-candidate election would exhibit a cycle. Of course, in real life political cultures are not impartial. Preferences are not distributed among voters by spinning a roulette wheel. Rather, they reflect underlying political cleavages. An obvious explanation of the paucity of empirical evidence is that in real-life politics, opinions tend to be single-peaked or otherwise value-restricted. To repeat Scott Gordon's judgment, there might be a "considerable degree of commonness of ends" (see also Niemi, 1983). But against this intuition, we can put Riker's observation that politicians often have strategic reasons to contrive cycles by introducing divisive alternatives and by voting strategically. In Riker's vision, preferences are not just out there, as givens. Rather, they are shaped by politicians.

In the ensuing list (extended from Gehrlein, 2006; Mackie, 2003; Vergunst, 1996), I have collected most of the results of the paradox-hunting of the last 30 years:

Study	Subject	Top cycle?
Riker (1965)	US House of Representatives (1956)	Yes (1)
Riker (1965)	US House of Representatives (1911)	Yes (1)
Blydenburgh (1971)	US House of Representatives (1932)	Yes (1)
Niemi (1970)	University of Rochester	Yes (1)
Van den Doel (1979)	Dutch Parliament (1973)	Yes (1)
Bjurulf & Niemi (1978)	Swedish Parliament	Yes (3)
Dobra (1983)	32 academic organizations	Yes (1)
Wolters (1980)	Dutch Parliament	No
Toda, Sugiyama, & Tagawa (1982)	Opinion thermometers (Japan)	No
Chamberlin, Cohen, & Coombs (1984)	Am. Psychological Association (1976–1981)	No

Study	Subject	Top cycle?
Riker (1984)	American Constitutional Convention (1787)	Yes (1)
Niemi & Wright (1987)	US presidential elections (1980)	No
Dietz & Goodman (1987)	Peruvian mayoral elections (1983)	No
Hill (1988)	Royal Statistical Society	No
Rasch (1987)	Norwegian Parliament (1980–1986)	No
Feld & Grofman (1988)	US electorate in 1980	No
Feld & Grofman (1992)	36 private organizations	No
Radcliff (1994)	US presidential elections (1972–1984)	No
Neufeld, Hausman, & Rapoport (1994)	US Senate (1925)	Yes (1)
Abramson, Aldrich, Paolino, & Rohde (1995)	US presidential elections (1968–1992)	No
Gaubatz (1995)	US opinion polls on the Gulf War (1990)	Yes (1)
Stratmann (1996)	US House of Representatives	No
Felsenthal & Machover (1995)	92 private organizations	Yes (2)
Browne & Hamm (1996)	French Parliament (1951)	Yes (1)
Taylor (1997)	Senatorial elections (N.Y., 1980)	No
Vergunst (1996)	Dutch Parliament (1998)	Yes (1)
van Dam (1998)	Dutch Parliament (1996)	Yes (1)
Regenwetter & Grofman (1998)	7 private organizations	Yes (1)
van Deemen & Vergunst (1998)	Party opinions of Dutch voters (1982–1994)	No
Härd (1999)	Party opinions of Swedish voters (1982–1991)	No
Adams & Adams (2000)	British and French elections (1987–1992)	No
Kurrill-Klitgaard (2001)	Danish opinion polls on the Prime Minister	Yes (1)
Regenwetter et al. (2002a)	8 elections in three countries	No
Regenwetter et al. (2002b)	4 US presidential elections	No
Mitchell (2002)	Australian referendum on republic (1999)	No
Kurrild-Klitgaard (2005)	7 Danish elections (1973–2001)	No
Bochsler (2010)	Referendum in Bern (2004)	Yes (1)
Total number of alleged top cycles		20

Thus, during the last 45 years, the specialists in the subject have spotted 20 potential real-life instances of the Condorcet Paradox. The list is not particularly encouraging for a paradox hunter. There seems to be a clear gap between the theoretical prediction and the empirical results. What is more serious is that most of the alleged cases are based on contestable evidence. Van den Doel's finding has been criticized by Lijphart (1975); Riker's account on the Depew amendment in the

US Congress in 1911 (Riker, 1965) has been challenged by Green and Shapiro (1994, 110–111), while his equally famous analysis of the Powell amendment from 1956 (Riker, 1965) has been criticized by Gilmour (2001). The most devastating criticism, however, comes from Gerry Mackie (1998, 2003). Mackie has carefully gone through all Riker's findings, plus those in our list by Blydenburgh (1971), Bjurulf and Niemi (1978), Neufeld et al. (1994) and Gaubatz (1995). According to Mackie, *all* the cases re-examined by him are based on insufficient evidence. In all the cases, the data either shows that there actually was no cycle, or the data are at least compatible with an alternative description. The criticized findings are the most celebrated empirical cases, repeated in several works on social choice. If all these (ten supposed instances) have to be deleted from our list, very little is left. Many authors have remarked that convincing, politically relevant real-life examples of the problem are rare (Gehrlein, 1983; Johnson, 1991; Lijphart, 1975; Mackie, 2003; Panning, 1985; Regenwetter & Grofman, 1998).

Some additional methodological remarks can be made. Almost all positive results are based on case studies concerning parliaments and committees, while the negative results are based on larger samples. This looks like an anomaly, since the probability calculations (above) indicate that cycles would be *more common* in large elections than in small committees. An especially telling example of the absence of cycles in large populations is Van Deemen's and Vergunst's (1998) study on the four Dutch parliamentary elections (1982–1994). In all the elections, there were 9–13 parties running, so a priori probability of having no Condorcet winning party in each of the elections would, according to Gehrlein's calculations, have been between 0.45453 and 0.56869 (Van Deemen & Vergunst, 1998, 478). However, the authors did not find a *single* instance of cycles from voters' preferences. "The results are surprising indeed" (p. 483), but in the line with previous research on cycles in large elections: "for some reason or another, cycles in large elections are scarce" (p. 485). In a study on U.S. presidential elections, Benjamin Radcliff (1994) produced equally negative results. According to him, "It seems prudent to conclude that, if nothing else, cyclical majorities are not commonplace events where mass electorates are concerned" (p. 55). In those cases where top cycles were found in larger samples (Dobra, 1983; Felsenthal & Machover, 1995; Regenwetter & Grofman, 1998), their number was much smaller than expected. In small bodies, systematic studies indicate that the role of cycles is usually negligible. B. E. Rasch (1987) studied the voting in the Norwegian Storting in 1980–1986; his conclusion is that although the possibility of unstable and ambiguous outcomes cannot be totally ignored, they will seldom occur.

Thus, "Whether cycling actually occurs in the processes that are decided by majority rule has been a long-standing question" (Stratmann, 1996, 16). The meagre reports on cycles from real life have tended to concern politically insignificant cases, such as university elections or elections occurring in scientific associations. On the other hand some such studies have also produced negative results.

S. L. Feld and B. Grofman, after studying 36 elections in various associations using the single transferable vote-system, report that

> every election had a Condorcet winner. Where there were intransitivities, they included only a limited number of elements. Of the 36 elections, 24 are perfectly transitive. Moreover, in those cases where intransitivity does occur, almost the only observed intransitivities are between alternatives adjacent in Borda scores, and in 34 of 36 elections the Borda winner and the Condorcet winner coincided. (Feld & Grofman, 1992, 235)

The authors conclude that although they have not exorcised the paradox of cyclical majorities, they have "put its importance for ordinary political choice into a more realistic perspective" (p. 235). Moreover, negative results are far less likely to get reported. If, for example, an enthusiastic scientist suspects a cycle in some individual cases, but does not find one, she is less likely to report her failure, and is less likely to get her study published if she tries to report it. A negative result is likely to appear in public only if there are strong theoretical or empirical reasons to suspect the presence of a cyclical configuration.[1]

The general conclusion is that "cycles do not appear to be a real problem for group decision making" (Feld & Grofman, 1986, 72; cf. Tullock, 1981, 189). All this gives the impression that the cycles are, at best, rare oddities. Those still believing in the importance of cycles may answer that the methods used in the analysis of large samples are unable to reveal the possible cycles lying under the analysed situations, but the sceptics may reply that the positive historical accounts are often speculative, based on insufficient and merely anecdotal evidence (Green & Shapiro, 1994, 109–112; Mackie, 1998, 78; 2003). One commentator concludes:

> theoretical expectations are clearly at odds with what we know empirically about most legislatures. Unless the observed stability of legislative processes is simply dismissed as illusory, this inconsistency between theory and observation poses awkward problems for formal theorists. (Panning, 1985, 680–681)

Some authors have indeed argued that the observed stability can be fully explained in terms of institutions. To quote van Mill: "...it is not very fruitful to search for voting cycles in institutions that are not pure [institution-free] settings, because one of the defining features of such institutions is that they are set up to provide stability" (van Mill, 2006, 42). Institutions provide stability by violating the standard social choice conditions; most notably they tend to violate independence of irrelevant alternatives as well as path-independence. They guarantee a relative stability of *outcomes* in the sense that decision-processes produce some outcomes, and the same decisions are not constantly made and unmade. But institutions do not explain why we have so few cases in which the *underlying preferences* are unstable, that is, cyclical.

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[1] However, there can be methodological biases in the other direction, too: those interpreting large samples have not paid attention to the statistical significance of their results (Kurrild-Klitgaard, 2005, 9).

7.1.2   Strategic Voting in Assemblies: Does It Ever Occur?

While "natural" cycles may be unusual for various reasons, the theories informed by the social choice results predict that it would often be advantageous to create cyclical situations through misrepresentation of preferences (Patty & Penn, 2014, 46; Riker, 1982). For example, Mackie (2003) argues that many alleged "natural" cycles (listed in the table above as alleged instances of the Condorcet paradox) are more properly analysed as cases of strategic voting. Therefore, it is significant that a great part of the research on strategic voting also examines theoretical possibilities rather than political realities. There is, of course, a lot of evidence on what Dowding and van Hees would call "sincere" strategic voting (Sect. 4.3.5). Voters, most notably in plurality and runoff elections, tend to vote for their "second best" for strategic reasons. In contrast, there are only a few well documented cases of *more sophisticated* ("insincere") *manipulation practiced in representative assemblies.* About the cycles, we made the opposite observation: the most convincing cases appeared in small assemblies rather than in mass elections. This is surprising, for the theoretical prediction is just the opposite: cycles would be more common in mass elections; strategic voting would be more likely to appear in committees. First, the probability that a single voter could have a significant effect on the outcome in a mass election is negligible. This is likely to discourage purely instrumental use of votes. Second, the information needed for effective strategic voting is more easily collected in small assemblies.

It is the possibility of manipulation in parliamentary decision-making, rather than the more commonplace and less ambitious strategic conduct of ordinary voters, which made Riker formulate his "meaninglessness" argument (D). If the general picture given by the social choice theorists is correct, such stratagems should be very common in political assemblies, especially when the stakes are high. However, as Krebhiel and Rivers have remarked, "...agenda manipulation and sophisticated voting are rarely mentioned in the most detailed accounts of congressional decision making. Of the half-dozen or so papers which are exceptions to this rule, at least four focus on the same set of roll-call votes" (Krehbiel & Rivers, 1990, 549).

Thus, the most celebrated example of strategic voting seems still be found in the letter of Pliny the Younger at the beginning of the second century A.D.[2] It remains as the most popular case in the textbooks, Riker's contested account of the Powell amendment in the US Congress in 1956 being the next popular one. There are at least ten studies focusing on the latter case. However, the main research problem seems to be whether the case in question really *was* an instance of strategic voting, in other words, whether the event that should be explained actually took place! Moreover, some attempts to find further evidence on strategic voting in assemblies

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[2] See *The Letters of the Younger Pliny.* This case was rediscovered by Farquharson in his *Theory of Voting* (1969), but had already been discussed in strategic context by Samuel Pufendorf (1688/1934) and again by Albert Heckscher (1892).

have failed. For example, in his study on the Norwegian Storting, B. E. Rasch concludes that "strategic voting (...) is almost nonexistent in the Norwegian parliament (...) Furthermore, we can be quite sure that this marked tendency towards sincere voting hides no deceptive manoeuvring" (Rasch, 1987, 63; cf. Rasch, 2004).[3] Similarly, Menno Wolters (1980) has found no evidence of strategic voting occurring in the Dutch parliament. More moderately, Chamberlin et al. (1984, 494) state that "we do not know whether the logical possibilities of theorems will be of empirical importance".

So it seems that the most celebrated results of social choice can be related, at best, only to some very unusual and highly marginal empirically observable phenomena. Riker's suggestive idea was that in the long run politics is always in disequilibrium, and that this fact should force us to put the whole idea of democracy into a new perspective. This idea has not received much empirical support. Indeed, many students of the subject have taken it for granted that in reality political processes are relatively stable and that the main question is to explain why. For these reasons it is understandable that

> it has been difficult for political scientists to gauge the importance of the theoretical results of social choice theory. Many who find the theorems insufficient grounds for changing their views of the role of voting in democratic societies will remain unconvinced by an empirical literature that seems only dimly related to naturally occurring elections. (Chamberlin et al., 1984, 481)

In a similar vein, John B. Gilmour remarks how

> there is an alarming shortage of documented instances of voting cycles; and examples are needed to anchor theoretical work in the reality of political life (Gilmour, 2001, 259)

But what does the empirical evidence really tell us? It has been remarked that the Rikerian interpretation—that politics is an unstable process—is not directly testable. No amount of negative evidence can refute it, for its defenders can always answer that any observed *non-occurrence* of a political cycle either contains a cycle hidden by institutional factors, or belongs to the pockets of stability existing in the general chaos. This does not, however, make the thesis empirically irrelevant. As a whole, the post-Kuhnian discussion on testability shows that all sciences contain organizing elements which cannot be tested. Their fruitfulness is measured through their ability to generate particular hypotheses which can, in the wide sense of the word, be tested. However, indirect testability is not a sufficient condition for the acceptability of a comprehensive research programme: it also has to be able to provide an intellectually interesting vision of its subject. Generally, the Rikerian interpretation should be rejected if, in the long run, it is unable to give us anything which would help us to understand better the nature of real-life politics.

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[3] Rasch's results confirm Heckscher's earlier (1892) judgment that the serial (or successive) voting rule used in most Continental parliaments is more resistant to strategic voting than many other rules.

What is the relevance of these considerations to Riker's *normative* thesis that the populist institutions are unjustifiable and his own idiosyncratic version of liberalism the only alternative? Even if we were willing to reject Hume's and Kant's strong separation between "ought" and "is", there seems to be no simple logical route from empirical observations to normative prescriptions. But, given my critique of the simple, pre-Rikerian interpretation of the social choice results, empirical findings have an indirect normative relevance. To repeat my argument against Wolff, Levine et al. (Sect. 5.1.3), institutions are not like deductively closed theories. The fact that an institution *may* produce irrational results under some conceivable circumstances is not a sufficient reason for change, if we also have good reasons to believe that the problematic circumstances will never manifest themselves, or that the practical consequences of having an occasional irrational result are likely to be marginal. We have seen that Riker's way of interpreting the Impossibility Theorem is only one among many. The intellectual importance of the Theorem does not stand and fall with Riker's interpretation. But if Riker's problems (C)–(E) are not among the difficulties faced by the real world democracies, at least some alleged consequences of the Theorem may be ignored. Thus, if there is very little or no evidence supporting Riker's general vision of politics, we may have a reason to ignore his normative arguments.

The aim of the following sections is to introduce a small sample of real-life cases of social choice by reviewing the history of one single democratic institution in the light of the theory of social choice. I think that these cases are politically more important, better documented, and more transparent illustrations of the social choice paradoxes than most cases found in the existing literature on social choice.

7.2   The Tale of Two Colleges

The social choice-mechanism example in this chapter is the traditional Finnish presidential election system which was in use from 1925 to 1988. Of course, it is an institution I happen to know relatively well. But this is not my only reason for selecting it as a test case. As Gehrlein (1983, 165) remarks, "Actual observations of (...) Condorcet's paradox are difficult to find. This difficulty results from the complexity of the voting system that would be required to observe the paradox". In this context, the Finnish presidential election system is a promising subject of study for several reasons: the system *was* quite complex, and, because of the political importance of the elections, the courses of events are unusually well documented (although also heavily contested). And there is an additional reason why electoral colleges in general are interesting subjects for social choice analysis: they are representative bodies elected for the specific purpose of making *one single decision*.

7.2.1 The Finnish Case: The Institutional Background

In the Finnish system, a 300-member electoral college was elected on the basis of proportional representation (a version of the d'Hondt-system). The electoral results tended to be very proportional. One month after its election, the Electoral College assembled and elected the President. The rule used by the Electoral College was a modification of the plurality runoff. In the first round, the college voted on all the candidates put forward by the groups represented in the college. Usually they were parliamentary parties or coalitions of such parties. If no candidate won more than 150 votes, the electors took a vote again between *all* candidates. If no absolute majority was reached in the second ballot, the third round was arranged between the two candidates who received most votes in the second round. In the first and the second rounds, the electors were free to introduce new candidates; the choice did not have to be made between the candidates who officially stood for election (the same rule was used in the direct runoff elections of the President of the Weimar Republic). In the earliest case discussed (1925), some parties did not nominate any candidate at all before the general elections. In principle, the electors could vote for anyone they liked; but in political practice there has traditionally been a clear difference between the candidates introduced during the electoral contest and "dark horses" introduced into the Electoral College. The introduction of new candidates has generally been looked on with suspicion.

The vote in the college was secret. In some cases, the groups demanded that individual electors show their voting slips either to the party whip or to other electors—the Social Democrats, for example, used the latter method in 1956. However, it has been noted that this system was not watertight. Generally, the party leaders were able to infer the general pattern of preferences, but not to monitor the behaviour of individual electors.

This system seemed to be especially attractive for political manipulators, for several reasons. First, the plurality runoff does not satisfy the condition of monotonicity, and this property can be utilized by the strategists (Sect. 4.3.2). As Nurmi (1987, 75) says, when the plurality runoff method is used a group supporting a candidate with almost but not quite 50 % of the first ranks is well-advised to think how to distribute its "surplus" votes in the first round, i.e. the votes that exceed the number needed to get their favourite into the second round. Second, another property of the plurality runoff method is that although a candidate who is a Condorcet-winner will be elected if she survives to the final round, there is no guarantee that she will not be eliminated in the earlier rounds (Sect. 3.2.3).[4] Third, the open agenda, or the possibility of introducing "surprise" candidates without any restrictions made the system vulnerable to agenda manipulation. All these formal properties are relevant for the present study.

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[4] The plurality runoff will elect a Condorcet-winning candidate who has more than 33.3 % first-preference support—*if* there is no strategic voting. This "if" is highly significant, as we shall see.

There were besides several non-formal institutional properties which also made manipulation an attractive alternative. The system of proportional representation used in the election of the college ensured that several groups were always represented. The runoff method seemed to have had a similar effect (Jones, 1995; Wright & Riker, 1989). Moreover, after the election of the college, the parties had a whole month to collect information and consider their strategies. In the very election process there were "negotiation breaks" between the ballots, so that the groups had time to revise their strategies if needed. In a system with three rounds, the actors can learn more about the others' preferences than in a two-round plurality runoff or in a simple plurality system. Because the second round had no eliminative effect, it worked as a "straw poll". Moreover, as compared with a direct election, an election in a small college is much easier to manipulate by strategic voting. Finally, and perhaps most importantly, *the Electoral College was almost completely unaccountable*. For the electors, it was clearly irrational to make binding commitments beforehand. A commitment to vote in a particular way could have a counterproductive effect—it actually had such an effect in the 1956 elections, as we shall see. Moreover, after choosing the President, the College would next assemble after 6 years, with a different composition, so the *ex post* accountability was minimal. Those electors who were career politicians might, of course, be punished or rewarded in some other elections, but that risk was relatively small. In sum, the old Finnish Electoral College was a rare example of an elected body which (unlike its American counterpart, discussed below) had a total freedom of choice. It is no wonder that "the presidential game"—as it is popularly called—is, in Finland, an art of its own.

In the presidential elections in 1994, the system was replaced by direct elections (a plurality runoff with two rounds). The dissatisfaction with the old system was quite widely shared, and it was clearly related to its perceived vulnerability to strategic voting. However, as the social choice results tell us, the new system must have its own strategic properties. (On these properties, see an interesting article by Maija Setälä, 1994.) If the Finnish "presidential game" is far less exciting nowadays than it was 20 years ago, it is more due to the radical diminution of the President's power rather than to the new electoral system. Traditionally, the political importance of the presidential elections has been enormous. Before the recent constitutional changes, Finland was often described as a "semi-presidential system", like France. The constitutional powers of the President were unusually wide, and during the post-War period, they become even more extensive in practice, due to Finland's delicate geopolitical position. For the purposes of this study, the most relevant constitutional powers were (i) the status of the President as the leader of foreign policy, and (ii) his power to nominate the Cabinet—at least *de facto*, he had a say even in the nomination of individual ministers. The former issue, the direction of foreign policy, was at any rate in 1956, an independent political dimension which did not easily correlate with the traditional Left-Right dimension. As a result of the exercise of the second power, that of appointing the government, the possible payoffs for the members of the Electoral College—even in personal terms—were often high. The coalition which elected the President usually became the

dominating coalition in governmental politics. Thus, the presidential election tended to be a central political event which periodically reorganized or reinforced the whole system of political alliances.

Due to the importance of presidential elections, the course of events is usually well-documented, if also passionately contested. Unfortunately, there are very few systematic scientific studies relevant to my topic. Most works on the subject are written either by historians or by the politicians themselves, and I have utilized them where necessary (in the case of the 1956 elections, almost exclusively). There is, however, one important exception to the general lack of scholarly works. In his doctoral dissertation, Paavo Hirvikallio (1958) made an excellent descriptive study of the presidential elections from 1919 to 1950. Hirvikallio not only read all sources available (including several private archives) but also interviewed all the former members of electoral colleges alive in 1958—an enormous task. Unfortunately Hirvikallio had no clear theoretical framework. But his book gives a very detailed picture on the election processes. For the elections of 1925, 1931 and 1937, I shall rely mainly on Hirvikallio's work.

Since 1919 and before the change of the method in 1994, the President of Finland has been elected 16 times. In six cases (1919, 1940, 1943, 1944, 1946 and 1974) an exceptional procedure was used—a fact which reflects not only the turbulent history of the country but also the low legitimacy of the election procedure itself. In six cases (1950, 1962, 1968, 1978, 1982, 1986) a likely Condorcet-winner existed and was also elected. This leaves us the four cases (1925, 1931, 1937, and 1956) which form the subject of this study. However, interesting strategic phenomena can be concealed in the other cases, too. In those cases the crucial games were not played in the Electoral College, but in party caucuses and ultimately on the mental chessboards of the party strategists. I shall discuss on one possible example (the elections in 1982).

7.2.2   The Preferences of the Actors in the Pre-war Finnish Politics

There is usually more than one important dimension operative in Finnish politics. The first three cases discussed here occurred before the War. In those cases we can distinguish at least three partly (but only partly) independent political dimensions. There was the traditional Left–Right dimension, and the linguistic dimension—Finnish-speaking nationalism vs. Swedish-speaking (minority) nationalism. A third dimension was related to the acceptance or rejection of the liberal-democratic system. As in many other European countries, there was in Finland a significant authoritarian Right-wing tendency which, without endorsing full-blown Fascism, favoured personalized rule and advocated the banning of Leftist parties.

Of the parties represented in the first three cases *the Conservatives* (Kansallinen Kokoomus = KOK) were basically a Right-wing, Finnish nationalist party. In

constitutional questions, the party favoured monarchy or strong presidential leadership; in 1931 as well as in 1937 it was allied with the extreme Right.

The Swedish People's Party (Svenska Folkpartiet = SFP) was a loose coalition uniting Swedish-speaking Finns from the far Right to the Centre. Basically, it was Rightist in economic issues and divided on constitutional issues.

The Agrarian League (Maalaisliitto = ML) was a Rightist-Centrist party which supported Finnish-speaking nationalism but also democracy.

The Progressive Party (Edistyspuolue = ED) was a predominantly liberal party: Rightist, less nationalistic and firmly for the democratic constitution.

On the left *the Social Democrats* (Suomen Sosialidemokraattinen puolue = SDP) was moderately Socialist, neutral in the language issue, and firmly pro-democratic. *The Socialist Worker's Party* was predominantly a Communist organization and was allowed to participate only in the 1925 elections. In 1931 and 1937, the Communists were excluded from the elections. They re-emerged into the Finnish politics only after the War.

The three dimensions mentioned above explain only a part of the preferences revealed in the cases discussed. Most parties contained two or more factions, and the personalities of different candidates were sometimes as important as their party affiliations. In the pre-war situation a certain division of power emerged: because the majority of the voters were Finnish-speaking and non-Socialist, it was clear that the SFP and the SDP had no chances of getting their candidates elected as President. But, at the same time, no President could be elected without the support of either party.

7.2.3   The Elections in 1925

The extraordinary thing in the 1925 elections was that only the Progressives (ED), the Social Democrats (SDP) and the Communists (SSTP) had nominated candidates of their own; the others had left the final decision to the groups of electors. The Communist electoral group refused to negotiate with the others. In the last round they casted invalid votes. Here we have an interesting case: an actor which unambiguously refused to act in a strategic way.

After the election of the college, a complex series of bilateral negotiations followed; the parties tried to "veto" each others' potential candidates by making conditional (and sometimes misleading) promises and threats. The most important aim of both the Social Democrats and the Agrarians (ML) was to prevent the election of any Conservative (KOK) candidate, while the SFP-group and the Conservatives wanted to prevent the election of the Progressive candidate Risto Ryti—the Social Democratic candidate did not have chances in any case. Both the Conservatives and the Agrarians were willing to support any candidate of their own, provided that they had real chances.

Strategies were used already in the selection of the candidates. Thus the Agarians seemed to have promised conditional support for the Conservatives,

provided that these changed their most prominent potential candidate, P. E. Svinhufvud, to the less well known Eino Suolahti. By this manoeuvre the Agrarians probably wanted simply to eliminate Svinhufvud from the contest, for they knew that he enjoyed general support in the Swedish-speaking (SFP) group. (Svinhufvud was one of the architects of Finland's recent independence.) It seems that the Agrarians had no real intentions of supporting *any* Conservative against their own candidate, although some of them might have been willing to support Svinhufvud against the Progressive candidate Ryti. The Swedish-speaking group, in its turn, rejected all other possible Agrarian candidates except Lauri Relander, whose initial support in his own group was rather limited. In the second round, the three main candidates were, then, Suolahti (KOK), Relander (ML) and Ryti (ED). A fourth candidate, the Social Democrat, Tanner, was the least preferred alternative for all non-Socialist groups. Table 7.1 gives a general picture of the preferences in different groups.

There are several sources of uncertainty in this table. The Communists (SSTP) did not express any preferences at all. The majority of the Agrarians and the Progressives probably put Suolahti below Ryti and Relander in their rankings, but there were internal divisions in both groups. The distribution of the preferences in the Swedish group (SFP) is difficult to estimate. The major objective of most Swedish electors was, however, to stop the Progressive candidate Ryti. They recognized that while they could help Suolahti into the third round, he would almost certainly lose against Ryti. The Agrarians had informed the SFP electors that they were not willing to support Suolahti against Ryti—although the Agrarians had just persuaded the Conservatives to introduce Suolahti instead of their original candidate! This meant that in the last ballot there would be only 103 secure votes supporting Suolahti. Because the Social Democrat Tanner had no chance against any non-socialist candidate, the whole of the SDP group would almost certainly vote strategically for Ryti in the second ballot. That would be enough to help Ryti to the last round and to victory. The reasonable strategy for the SFP was, then, to vote for the Agrarian candidate Relander who was at least their second-best alternative.

In the second round the distribution of votes was the following:

Candidates	Votes	Electors' party affiliation
Ryti	104	SDP 76 + ED 28
Relander	97	ML 69 + SFP 23 + ED 5
Suolahti	80	KOK 68 + SFP 12
Others	19	

Thus, the Conservative candidate, Suolahti, was dropped. Ryti and Relander entered into the third ballot and Relander was elected on the votes of the SFP, Conservatives (KOK) and Agrarians (ML). The table above shows that Relander was most likely a Condorcet winner. His election, however, was possible only through strategic voting—at least some of the SFP electors voted against their true preferences. Had the SFP group voted "sincerely" for Suolahti, the Agrarians would have helped Ryti to victory.

Table 7.1 The 1925 distribution of electors and preferences by party

Party	KOK	SFP(1)	SFP(2)	ML	ED	SDP	SSTP
Electors	68	16	19	69	33	79	16
Preferences	SU	SU	RE	RE	RY	TA	–
	RE	RE	SU	RY	RE	RY	–
	RY	RY	RY	SU	SU	RE	–
	TA	TA	TA	TA	TA	SU	–

SU Suolahti, *RE* Relander, *RY* Ryti, *TA* Tanner

The agenda itself was formed as a result of a complex strategic process, in which several potential candidates were eliminated from the final set. Among them were some generally popular politicians (for example, the widely respected Conservative Svinhufvud and the pro-Agrarian Progressive Vennola) who might well have been able to defeat all those who were in the final set. Very few people—and certainly not the ordinary voters—could anticipate the result. According to one historian, Relander's election was "a complete surprise" (Hokkanen, 1986, 424).[5]

7.2.4   The Elections in 1931

In the next elections, all groups, with the exception of the SFP, put forth their own candidates. The political field was more polarized than in 1925, and the preferences of the parties were relatively clear. Again, the Social Democrat candidate, Tanner, had no support outside his own party. As in 1925, the main purpose of the Conservatives was to prevent the election of the Progressive candidate, while the Social Democrats were firmly committed to support him as a lesser evil. In contrast to the situation in 1925, the Agrarians were now willing to accept a Conservative as the second-best. The SFP group was divided between the supporters of the Conservative Svinhufvud and the Progressive (liberal) ex-President Ståhlberg. At this time, the Agrarian candidate Kallio—a Finnish nationalist who, unlike most leading politicians, could not even speak Swedish—was totally unacceptable to the Swedish-speaking group.

The preferences were given in Table 7.2.

The only possible source of uncertainty in this table is the exact distribution of preferences inside the heterogeneous SFP group. However, the actual course of events shows that 18 of its members preferred Svinhufvud to Ståhlberg. Both candidates entered into the last round, and the former was elected with 151 votes. Had the alternative in the last ballot been Kallio instead of Svinhufvud, almost all SFP-electors would probably have voted for Ståhlberg. And finally, had Kallio entered into the last round against Svinhufvud, the Social Democrats would

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[5] On details of the election, see Hirvikallio (1958, 19–45), Relander (1967, 14–17), von Bonsdorff and Jernström (1984, 259–269).

Table 7.2 The 1931 distribution of electors and preferences by party

Party	KOK	SFP(1)	SFP(2)	ML	ED	SDP
Electors	64	18	7	69	52	90
Preferences	SV	SV	ST	KA	ST	TA
	KA	ST	SV	SV	KA	ST
	ST	KA	KA	ST	SV	KA
	TA	TA	TA	TA	TA	SV

SV Svinhufvud, *KA* Kallio, *ST* Ståhlberg, *TA* Tanner

certainly have voted for Kallio in order to prevent a Conservative presidency (as they, indeed, did in 1937). Even without the support of the Progressives (ED), that would have been enough to ensure Kallio's victory. Thus we get the following pairwise results:

Svinhufvud 151—Ståhlberg 149 (*actual result*)
Ståhlberg 167—Kallio 133
Kallio 211—Svinhufvud 89

Although Svinhufvud's victory was the narrowest possible one, in the two hypothetical contests the vote margins of the winners are wide. We can say with a great deal of confidence that in the 1931 elections, *the collective preferences were cyclical*. Indeed, I believe that this is the clearest example described in contemporary literature of cyclical preferences over an important political issue.

How was the cycle actually broken? For the Social Democrats it was clear from the start that the best they could do was to get the Progressive Ståhlberg elected. In order to secure this, they decided to vote for him in the second round, but also to allocate 15 votes for Kallio, in order to ensure that their favourite would get the weakest possible opponent. Their crucial strategic mistake was *to make this decision public*. At first the Agrarians tried to press both the Conservatives and the Social Democrats by threatening to vote either for Ståhlberg or Svinhufvud if these parties did not support Kallio. However, the more conservative wing of the Agrarians was so decisively against Ståhlberg that they voted for Svinhufvud even in the first round, in order to neutralize the expected strategy of the Social Democrats. Obviously, the more conservative Agrarians recognized that Kallio had no real chances against Ståhlberg, and that the Social Democrats were simply trying to utilize the non-monotonic nature of the runoff procedure in order to ensure the victory of their favourite.

After this countermove, the Social Democrats did not want to take the risk involved in dividing votes. From their point of view, the risk was that by allocating votes to Kallio they might actually drop Ståhlberg from the last round. Thus they did not implement the vote-dividing strategy, and in the second round the distribution of votes was the following:

Candidates	Votes	Electors' party affiliation
Ståhlberg	149	SDP 90 + ED 52 + SFP 7
Svinhufvud	98	KOK 64 + SFP 18 + ML 16
Kallio	58	ML all

The 16 votes for Svinhufvud given by the ML electors (1 more than the 15 votes promised to Kallio by the Social Democrats!) show that the conservative elements in the Agrarian group were determined in their attempt to neutralize the expected strategy of the Social Democrats. In the last round, the Agrarians exercised a tight party discipline over their group, and Svinhufvud was elected (See Hirvikallio, 1958, 46–66; Mylly, 1989, 272–277).

7.2.5   The Elections in 1937

In the last pre-war election, that of 1937, all the candidates were the same as in 1931. Even the distribution of seats was not radically different. The preferences of the parties were, if possible, even more consolidated than in 1931 (Table 7.3).

From this table, we get the following pairwise results:

Svinhufvud 162—Ståhlberg 138
Ståhlberg 158—Kallio 142
Kallio 189—Svinhufvud 111

Again, the margins in these hypothetical contests are wide. The only, but in this case a highly significant, factor of uncertainty was the internal division in the SFP. According to Schauman and Lilius (1992), the electoral campaign of the SFP was in 1937, strongly anti-Kallio. Of the 25 electors, 20 electors were "Svinhufvud's men" and only 5 Ståhlberg's (on p. 305 in their book, Schauman and Lilius go through the electors, one by one). The "official" majority preference in the SFP group was, then, $SV > ST > KA$.

As in the 1931 election, Svinhufvud would have defeated Ståhlberg. The Conservatives were more numerous than in 1931, and the Agrarians had not changed their position. By the combined votes of the Agrarians, the Social Democrats and the Progressives, Kallio could easily defeat Svinhufvud. About Ståhlberg and Kallio, Edvin Linkomies, a Conservative politician—later the Prime Minister—concluded in his memoirs that:

Table 7.3 The 1937 distribution of electors and preferences by party

Party	KOK	SFP(1)	SFP(2)	ML	ED	SDP
Electors	86	20	5	56	38	95
Preferences	SV	SV	ST	KA	ST	TA
	KA	ST	SV	SV	KA	ST
	ST	KA	KA	ST	SV	KA
	TA	TA	TA	TA	TA	SV

SV Svinhufvud, *KA* Kallio, *ST* Ståhlberg, *TA* Tanner

the result of the election was a surprise, for the majority of the members of the electoral college would, without a doubt, have given their votes for Ståhlberg, if they had had to choose between Ståhlberg and Kallio. (Linkomies, 1980, 27)

If Linkomies (a rather well-informed source) is right, the cycle was there again. Any of the three candidates could be beaten by some candidate.

This time, however, the Social Democrats were determined to prevent Svinhufvud's presidency. They informed the Agrarians and the SFP-group that they would vote for Ståhlberg in the first round, and if he were not elected, they would back Kallio unanimously. In the first round Ståhlberg got 150 votes, one vote short of the victory. Although most SFP-electors preferred Svinhufvud to Ståhlberg, the main objective of the majority in the party group was to prevent Kallio's presidency. When the Social Democrats had made the announcement that they would vote for Ståhlberg in the first ballot, and failing his election, switch to Kallio, von Born (the chair of the SFP group) explained to his group that "we have to accept Ståhlberg in order to avoid Kallio" (Schauman & Lilius, 1992, 306). The SFP group had already decided to vote strategically in the first ballot. However, 8 SFP electors refused to obey, and Ståhlberg got only 150 votes. In the next ballot, Kallio was elected. Because the SFP-electors should have been aware of the strategy of the SDP, commentators have speculated that some of them, in spite of their denunciations, actually preferred Kallio to Ståhlberg. All the eight SFP electors denied that they had intended the result, and claimed either the they had not taken the Social Democrats' threat seriously, or that they considered strategic voting "unethical". If, and only if, they *all* secretly preferred Kallio to Ståhlberg, we would have had a tie-cycle $(KA > SV > ST \sim KA)$ instead of a full preference cycle. It is, however, more plausible to suppose that some of the rebellious SFP electors were either behaving "ethically", or were just confused. The Swedish-speaking electorate was deeply divided over the Svinhufvud *vs*. Ståhlberg-issue, and some electors probably thought that they would betray their constituents if they did not vote for Svinhufvud at *any* stage of the process. If at least *some* of the eight electors had reasoned in this way, there would have been, again, a complete cycle. And because the other numbers are so clear, the exact position of the SFP minority group is really the only uncertain factor in the equation.

After the first round, the SFP group tried to persuade the Social Democrats to back Ståhlberg again, and promised three more votes to him in the second round. But the Social Democrats feared that the events of the 1931 election would repeat themselves, and reaffirmed their earlier decision to back Kallio. Then, the majority of the Progressives joined them, and Kallio was elected in the second ballot with 177 votes (Hirvikallio, 1958, 66–83; Stjernschantz, 1984, 242–245). We may conclude that in the election of 1937, *there was almost certainly a majority cycle working through the same set of alternatives as in 1931, but because the voting strategies of the groups were different, the outcome was also different.*

7.2.6   Dramatis Personae in 1956

Our next case is the election of Urho Kekkonen as President of Finland in 1956. From a social choice perspective, the case is especially interesting for the following reasons. The result of the election was extremely important in Finnish politics. The constitutional position of the President was then strong, and Kekkonen exercised effectively all the power given to him. Moreover, he was able to renew his presidency no less than four times, for a total period of 25 years. It is no exaggeration to say that the election of 1956 was the most important single political (or at least electoral) event in post-war Finnish history. Although there are no scientific studies on the subject, the course of events is well documented. Thus we know a lot about the preferences of the main actors and about the strategic calculations involved. In the light of the documentary evidence, there is no question but that strategic voting and agenda manipulation actually took place, and determined the outcome. As far as I know, there is, however, only one single reference to the case in the literature on social choice (Tsebelis, 1990). This gives a correct account of the process, but does not go into detail.

My sources consist of the memoirs of the leading politicians (Junnila, 1980; Martin, 1982; Meinander, 1978; Saukkonen, 1973; Skog, 1971; Virolainen, 1984), of journalistic writing (Lehtinen, 1982; Skyttä, 1970; Tuomioja, 1986) and of the few works written by professional historians (Majander, 2010; Paavolainen, 1989; Suomi, 1990). All important points of view, except that of the Communists, are represented. The material is full of personal biases and speculations (and professional historians seem to be no better than old politicians).[6] This is an advantage rather than a disadvantage. For the questions relevant for this study relate to how the actors themselves modelled the situation. Can their reasoning (as they themselves describe it) be translated into the language of the models of social choice? What kinds of games the political manipulators play in the real life?

The Conservatives (Kansallinen Kokoomus = KOK; 57 electors) backed *Sakari Tuomioja*. Tuomioja himself was not a party member, but an independent liberal. The party had chosen him in order to attract votes from the political centre (Junnila, 1980, 145).

The Swedish Party (Svenska Folkpartiet = SFP; 20 electors), still a loose coalition uniting Swedish-speaking Finns from the far right to the centre, was originally willing to support Tuomioja's candidacy. When, however, the Swedish-speaking Fagerholm became the Social Democrat candidate, the SFP was forced to put up a candidate of its own, *Ralf Törngren* (Tuomioja, 1986, 263).

The Finnish People's Party (Suomen Kansanpuolue = KP; 7 electors) was a small liberal party. Some of its prominent members were willing to support Tuomioja, but this became impossible when he was nominated as a Conservative

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[6] The sole scholarly historical work devoted exclusively to the subject appeared only in 2010 (Majander, 2010). It adds many interesting and colourful details, but basically confirms my earlier (Lagerspetz, 1993) reconstruction of the events.

candidate. Thus, the party had to put forth its own candidate, *Eero Rydman*. The party tried to attract the same voter groups as the Conservatives and wanted to assert its own identity. Moreover, there was a family quarrel between the party and the small group of independent liberals led by Tuomioja. Both groups saw themselves as the political heirs of the old liberal Progressive Party (Junnila, 1980, 147; Tuomioja, 1986, 256–257).

The Agrarians (Maalaisliitto = ML; 88 electors) supported *Urho Kekkonen*. As a long-serving Prime Minister, Kekkonen had already become the most important, and the most controversial, politician in Finland. His controversiality was related to his personality, and to his key position in the struggle on foreign policy. Although some prominent members of the old guard of his party had their doubts, the party as a whole was strongly committed to his candidacy.

The Social Democrats (Suomen Sosialidemokraattinen puolue = SDP; 72 electors) were internally divided—the party was to split officially in 1957. Before the election, there was a competition for the candidacy between *Karl-August Fagerholm* and the old war-time leader, Väinö Tanner. Fagerholm was nominated in the party congress by a very narrow margin, and the powerful faction led by Tanner looked at his candidacy with extreme suspicion. The quarrel had an international dimension: the Tanner faction sought economic and political support from the USA, while the Swedish-speaking Fagerholm had close ties with other Scandinavian Social-Democratic leaders.

The Communists were operating under an umbrella organization (Suomen Kansan Demokraattinen Liitto = SKDL; 56 electors). Nominally, the SKDL was not a Communist movement, but in those days it was under the complete control of the party. The SKDL candidate, *Eino Kilpi*, was not, however, a Communist party member. The party, one of the strongest in the Western world, was trying to break out from its parliamentary isolation and was eager to cooperate over the ideological barricades.

The incumbent President, *Juho Kusti Paasikivi*, had a Conservative background. However, with his skilful diplomacy, he had managed to create good relations with the Soviet leadership. For the Russians, especially for the old guard of the Soviet leadership, Paasikivi was a symbol of continuity in the Finnish-Soviet relations. For this reason, he was acceptable even to the Finnish Communists, although they disagreed with him in almost all political issues. Moreover, his personal authority was unquestioned. Had he not been so old—he was 85—he would certainly have been re-elected.

7.2.7   The Preferences of the Actors

As in the earlier cases, there were at least two relevant and only weakly correlated political dimensions. On the one hand, there was the traditional Right-Left dimension. On the other hand, parties were (sometimes internally) divided over the

questions of foreign policy. The Communists, the majority of the Agrarians (led by Kekkonen) and some "realists" inside the SDP and the "bourgeois bloc" (the Conservatives, the SFP and the KP) wanted to avoid confrontation with the Russians in foreign policy—and consequently aimed at continuing Paasikivi's policy of low-profile neutrality. The majority of the Conservatives and the Tanner faction in the SDP saw the current foreign policy as a temporary concession and supported a more Scandinavian and Western orientation in foreign policy. Because all the main groups were approximately of the same size, that is, had a 20–30 % electoral support, there was a possibility of a majority cycle: a coalition formed at one of the dimensions could be broken by manipulating the other dimension. This fact may explain, not only the problem involved in the 1956 presidential election, but the whole instability typical of post-war Finnish politics.

Generally, the Conservatives and the Social Democrats saw in Kekkonen a dangerous opportunist who was supposed to be willing to make deals with anybody in order to get into power. From the Agrarian point of view, the more extreme Conservatives and the Tanner faction in the SDP were irresponsible nationalists who had not understood post-war geopolitical realities. For the Communists, the Conservatives were still class enemies, but Fagerholm, the SDP candidate, was even worse: a traitor to his class. In the late 1940s, during the bitter fight over control of the trade unions, the SDP government had crushed the Communist-inspired strikes with an iron hand. That government had been headed by Fagerholm.

The Conservatives and the Social Democrats were not natural coalition partners either. The SDP candidate, Fagerholm, represented everything the Conservatives disliked. He stood to the left in his own party, he had no formal education, he did not belong to the Church, and, on top of it all, he was Swedish-speaking. And for the Social Democrats, the Conservative candidate Tuomioja was a typical upper-class liberal.

Both the Swedish and the Finnish People's Party were internally divided. Their own candidates were rather colourless, and had little hope of getting elected. The law allowed the introduction of a surprise candidate in the first or the second stages of the election. This weakened the chances of Törngren and Rydman. They might otherwise have appeared as compromise candidates but because the agenda was not closed, and they, as persons, were not attractive to other groups, their prospects were poor. The SKDL candidate, Kilpi, was certainly the worst choice for the electors of all the other parties. While all the leading politicians were sometimes willing to look for tactical support from the Communists, a deep ideological gulf separated even the left-wing Social Democrats from the Communists. This elimination-process left Tuomioja, Fagerholm and Kekkonen as the only "serious" candidates from the original set. However, the Communists had now the opportunity to play the role played by the Social Democrats in the pre-War elections: they could became kingmakers.

The preferences of different groups in the set of the three official main candidates are described in Table 7.4. The internal divisions inside the SFP and KP are taken into account, although they leave some room for speculation. The actual

Table 7.4 The 1956 initial distribution of electors and preferences by party

Party	KOK	SFP(1)	SFP(2)	KP(1)	KP(2)	ML	SDP	SKDL
Electors	57	19	1	5	2	68	72	56
Preferences	TU	TU	TU	KE	TU	KE	FA	KE
	FA	FA	KE	FA	FA	TU	TU	TU
	KE	KE	FA	TU	KE	FA	KE	FA

outcome of the last round reveals that in the KP at least five electors preferred Kekkonen to Fagerholm and in the SFP one or two electors had the same preferences. The position of Tuomioja in their preference orderings is more difficult to infer. However, at least two members of the KP elector group had supported Tuomioja's candidacy in the party council (Tuomioja, 1986, 257). It is reasonable to suppose that they preferred him to Kekkonen.

During the first stage, all groups in the Electoral College dutifully voted for their own candidates. During the 3 h between the first and the second ballot, all the parties engaged in intensive negotiations. In the course of the negotiations, Kilpi, Törngren and Rydman were dropped.

The situation might be described as a "possible cycle". There was no obvious Condorcet winner, and this was certainly perceived by the actors themselves (Virolainen, 1984, 272). Any kind of outcome, including a tie, seemed to be possible. As Meinander (a SFP-politician) later said, "when the electors assembled, no result could be predicted" and "all imaginable possibilities were tried" (Meinander, 1978, 150). For this reason the "bourgeois bloc" (KOK, SFP and KP) introduced a new candidate in the second ballot. Their choice was predictable: President Paasikivi.

The preferences of the groups in this new set of candidates can be inferred with great confidence (Table 7.5).

Thus Paasikivi was an obvious Condorcet-winner. From every point of view, he was, if not the ideal candidate, at least a tolerable compromise candidate. Again, the leaders of the groups certainly perceived this. However, in the second ballot, the Communists concocted a surprise. They divided their votes between Fagerholm, who was their least-preferred candidate, and Kekkonen, their favourite. Paasikivi received only the votes of the bourgeois bloc, and was dropped. The actual distribution of votes was as follows:

Candidates	Votes	Electors' party affiliation
Fagerholm	114	SDP 72 + SKDL 42
Kekkonen	102	ML 88 + SKDL 14
Paasikivi	84	KOK 57 + SFP 20 + KP 7

Thus Fagerholm got 42 extra votes from the SKDL. In the final round, Fagerholm got 149 and Kekkonen 151 votes; Kekkonen was elected President

Table 7.5 The 1956 distribution of preferences after the change of the agenda

Party	KOK	SFP(1)	SFP(2)	KP(1)	KP(2)	ML	SDP	SKDL
Electors	57	19	1	5	2	68	72	56
Preferences	PA	PA	PA	PA	PA	KE	FA	KE
	FA	FA	KE	KE	FA	PA	PA	PA
	KE	KE	FA	FA	KE	FA	KE	FA

with the narrowest possible margin. Because the election was secret, we cannot for certain know who voted for whom. The party strategists counted that all the 144 votes of the SKDL and the ML plus five votes from the KP went to Kekkonen. One elector of the SFP (Verner Korsbäck) was a likely supporter, too. One vote remains unexplained, and has caused endless speculation.[7] From my point of view the most interesting events occurred in the negotiations between the parties before and after the first stage. How was Paasikivi introduced? How did the Communists devise their strategy? Why did the other parties not anticipate it? What alternative strategies were available? The entire game is quite complex. I shall try to divide it into several sub-games and to analyse all of them.

7.2.8　The Game Inside the Bourgeois Bloc

Prima facie, the position of the Conservative candidate Tuomioja was quite good: he could rely on the support of 57 Conservative and 20 Swedish electors in the second round. With "straight" voting, that would have been enough to help him into the third round. Because Kekkonen was likely to get all the votes of the Agrarians (ML) and the Communists, the final contest would be between him and Tuomioja. The problem, however, was the pivotal role of the Finnish People's Party (KP). With its seven electors, the KP could help Kekkonen to victory even in the second round. Although no binding agreements could be made, the parties were forced to negotiate, so the game acquired a cooperative element. In the negotiations, other issues—for example, the composition of future cabinets—were unavoidably brought to the negotiation tables, and the Agarians were quite willing to connect the choice of the President with the question of the future cabinet coalition. The negotiating position of the KP was externally strong, but weakened by the internal divisions of the party. In the negotiations with the Conservatives and the SFP, the KP refused to back Tuomioja. Equally, it rejected the alternative proposed by the SFP, by which the negotiators of the three bourgeois groups would offer all their candidates to the Social Democrats and let them pick the candidate who was the

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[7] Of course, it is possible that there were "defections" in both directions. For example, there is the possibility that more than two KP-electors actually voted for Fagerholm, while some individual Conservative and/or Social Democratic electors voted for Kekkonen. I prefer the standard explanation, because it is more economical. Majander (2010, 178–179) agrees.

most acceptable in their eyes. That might have produced either Törngren or Rydman as a compromise candidate (Meinander, 1978, 150; Saukkonen, 1973, 250–251; Tuomioja, 1986, 282).

One possible explanation for the behaviour of the KP was that the party leadership was secretly negotiating with both the Social Democrats and with the Agrarians (ML) in order to get governmental posts as a direct reward for its support for their candidates, and a deal was actually made with the latter (Skog, 1971, 375; Virkkunen, 1976, 160–161). In any case, the party was facing a difficult choice: it had very little in common with Fagerholm, the majority of KP-electors could not stomach Tuomioja whom they regarded as a "traitor" to true liberalism, but support for Kekkonen might mean "political suicide" (Skyttä, 1970, 105). Thus the KP leaders persuaded the Conservatives and SFP to back Paasikivi, who was seen as an escape-route from the difficult situation. This was clearly against the deal made with the Agrarians; it is possible that the KP actually hoped that its attempt to bring in Paasikivi would fail (Saukkonen, 1973, 251; Virolainen, 1984, 290).

Some Conservatives proposed that the "bourgeois bloc" (KOK, SFP and KP) should make a strategic threat to the ML: if the latter were not willing to accept Paasikivi, the bourgeois parties would already vote for Fagerholm at the second stage. The problem with this proposal was that it was not credible. In the group meetings it turned out that some electors in the Conservative and SFP groups were strongly against Fagerholm and the KP group did not give any definite answer (Suomi, 1990, 491). For the Conservatives, the introduction of Paasikivi seemed to be the only way out of the situation. The enigmatic KP seemed to support this alternative; for the Social Democrats the old man was at least the second best; and even the Communists might be willing to accept him, at least when they recognized that the election of Kekkonen was no longer feasible. In the discussions with the bourgeois party negotiators, Paasikivi insisted that there should be "a substantial majority" or "more electors than in 1950" (171 electors) behind him. The negotiators, however, went back to their groups and presented Paasikivi's conditional assent in an unconditional form. They were probably hoping that it would have had a snowball effect so as actually to create a "substantial majority" in the last ballot. These hopes never materialized. There is some truth in the accusation that the old man was fooled into playing their unsuccessful game (Saukkonen, 1973, 252–253; Skog, 1971, 376).

7.2.9   The Game Between the Bourgeois Bloc and the Social Democrats

The major objective of both the Conservatives and the Social Democrats was to defeat Kekkonen. This was feasible only if the parties could coordinate their strategies (and even then, the support of the KP and SFP was needed). At the same time,

both parties wanted their own candidate elected, and looked at the candidate of the other party with certain suspicion.

The Social Democrats had the following possible strategies: (1) to support Tuomioja in order to avoid Kekkonen; (2) to support a "bourgeois" candidate acceptable to them (Paasikivi was the obvious choice); (3) to introduce a surprise SDP candidate who was acceptable to the Conservatives (Tanner was an obvious choice); (4) to make a compromise with other parties (the ML and the Communists) and to accept Kekkonen; (5) to support their initial candidate, Fagerholm, and try to force the bourgeois bloc to accept him as a lesser evil. Under the chairmanship of the prominent Social Democrat, Penna Tervo, the party committee of the SDP had made a ruling according to which the party could withdraw its support from Fagerholm only by a unanimous decision of all the electors, and the electoral group had confirmed the ruling. Thus the party intentionally tied its hands, and refused to negotiate before the election day. At the last moment, the negotiators of the party, Tanner among them, tried to persuade the electors to back Paasikivi. This proposal was rejected in the electoral group (Skog, 1971, 374–376; Paavolainen, 1989, 421–422).

The game between the KOK and the SDP somewhat resembled the formal game called the "Battle of the Sexes". In such an interaction situation, actors share an interest to find a common course of action, but different actors favour different options. The trick, then, is to convince other actors that one is going to ignore the others and to act in one's preferred way; the others have no choice but to follow the lead. The SDP behaved like an archetypical player in the Battle of the Sexes game: it tied its hands. Even threats were introduced. The Social Democratic press wrote that if the choice were to be between Tuomioja and Kekkonen, the party would back Kekkonen. It is not clear whether this expressed a real preference or whether it was a strategic threat. The Conservatives generally interpreted this threat as a piece of bluff (Tuomioja, 1986, 285).

This game was changed by two factors. The Conservatives introduced Paasikivi; in response, the ML and the Communists invented the strategy of dividing their votes between Fagerholm and Kekkonen. The crucial question in the new game was whether the ML-Communist strategy was anticipated by the SDP negotiators. Assuming that it was, why didn't the party change its own strategy? In the new situation, it could switch its support to Paasikivi, who clearly was the least risky alternative. For the Social Democrats, he was certainly a better choice than either Kekkonen or Tuomioja, and if the remaining candidates in the final stage had been Paasikivi and Kekkonen, Paasikivi would certainly have won. On the other hand, the SDP could have tried to persuade the bourgeois parties to move behind Fagerholm by informing them about the Communists' strategy. If they had agreed, the Communists would unintentionally have helped to elect Fagerholm in the second round. The original Battle of the Sexes between the KOK and the SDP was transformed into a more complex game.

There are three possible interpretations for the behaviour of the SDP electors: the first is that they simply did not anticipate the Communists' strategy. Voting for Fagerholm was intended as a tacit support for Paasikivi, which also satisfied the

ideological needs of the party. Fagerholm had only 72 electors against the 84 electors supporting Paasikivi. Thus Fagerholm was likely to be eliminated, and the party could support Paasikivi in the final round without openly rejecting its own candidate (Skog, 1971, 376). Hence there was no real risk involved. Several things speak against this interpretation: the party negotiators' eagerness to support Paasikivi, Tanner's comment to the Agrarian negotiators that the Communists were "able to pick up or drop anyone they wanted" (Virolainen, 1984, 275), and similar remarks of the Conservative negotiator Saukkonen (1973, 253). After all, at least Tanner should have been aware of the vote-dividing possibility: in the 1931 elections, the Social Democrats had contemplated a similar strategy.

The second possibility is that because Fagerholm's chances against Kekkonen were almost even, the supporters of Fagerholm were willing to take the risk and gamble. The reason why they could not persuade Paasikivi's supporters was due to a lack of time: the Communists made their final decision at the last moment. The third, subtlest explanation is based on the internal struggles in the party. It was generally known that Tanner and his group did not accept Fagerholm's candidacy; they probably preferred Paasikivi to Fagerholm. It has often been noted that the necessary condition for the success of the strategy of the Communists' was that the SDP electors would stick to their decision to back Fagerholm right to the end and would refuse to vote strategically. This is what happened. Now the person who orchestrated this strategy was Penna Tervo, who was on bad terms with both Tanner and Fagerholm. It is possible that Tervo actually preferred Kekkonen to Paasikivi and perhaps even to Fagerholm. Some commentators believe that Tervo did anticipate the result of the strategy adopted by the party, and even arranged the "decisive vote" for Kekkonen in the fateful third ballot. If this is true, Tervo played the game with an almost diabolical cunning: he led his party comrades to vote for their most preferred candidate, in order to secure that their *least* preferred candidate would be elected![8] (Martin, 1982, 154–156; Tuomioja, 1986, 284–285).

In the only theoretical analysis made on the subject, George Tsebelis claims that "to vote strategically, Socialist leaders would have to explain to their own party activists and voters why they were withdrawing their quite successful candidate—a difficult task" (Tsebelis, 1990, 4). I find Tsebelis' explanation to some extent unconvincing. In *all* earlier presidential elections, the Social Democrats had ended by backing a non-socialist candidate—in 1950, they supported Paasikivi. As far as the party activists were concerned, many of them were dissatisfied with Fagerholm's candidacy. Nevertheless, Tsebelis' explanation points in the right direction: the party leadership was playing two games simultaneously. One game was played against other parties, the other they played among themselves. The sub-optimal behaviour of the party was probably an outcome, perhaps unintended,

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[8] Majander (2010, 109–113) argues against the claim—put forth by Kekkonen's old friend Kalle Kaihari—that there was an explicit agreement between Kekkonen and Tervo. According to Majander, Tervo did not anticipate the outcome of the chosen strategy. He sincerely believed that the majority of the KP-electors would back Fagerholm (p. 113). Tervo was killed in a car accident a week after the vote, so this theory remains unconfirmed.

of the struggle between different factions: there were pro-Fagerholm, pro-Tanner, and quite likely, also pro-Paasikivi and pro-Kekkonen groups in the party.

7.2.10 The Communists' Dilemma

The idea of dividing the Communist votes in the second ballot was suggested by the Agrarian negotiators, possibly by Kekkonen himself. They had some difficulties in selling the idea to the Communists. One the day before the election, the party council of the ML discussed alternative strategies. The detailed strategic analysis in the hand-written notes of Johannes Virolainen, one of the important politicians in the party, reveals how the party leadership reasoned in this complex situation:

> The main candidates are Kekkonen, Fagerholm and Tuomioja, the solution in the III:d ballot:
>   1st alternative:

Kekkonen	Fagerholm
own votes 88	own votes 72
other possible support	other possible support
SKDL?	everything uncertain
The Finnish People's Party 5?	
SFP: some from the agrarian wing	

> Now it already seems, thought the party council, that the Communists will decide who shall get into the third ballot.
>   2nd alternative:

Kekkonen	Tuomioja

> This would be a better alternative for us than Alternative 1, for Tuomioja's chances of getting votes from the left are small. Would the Communists, then, help Tuomioja to the third election?
>   3rd alternative:

Kekkonen	Paasikivi

> This alternative would be the most dangerous from our and from Kekkonen's point of view. Kekkonen and Paasikivi being in the third election, the result would be very uncertain for Kekkonen. The Party Council of the Maalaisliitto thinks that this alternative should be prevented in the second ballot. (Virolainen, 1984, 272)

Before the first ballot, the Agrarians negotiated with all other groups. In the negotiations it became clear that the Conservatives and the Social Democrats were not willing to accept Kekkonen under any conditions. Moreover, although some individual members of the KP and SFP were willing to support Kekkonen at the final stage, the parties refused to accept any joint strategy with the ML against Paasikivi. Hence the SKDL, or the Communists, now became the most important

negotiating partner for the Agrarians. Virolainen's notes show that the possibility of strategic voting was discussed already before Paasikivi was brought forward as a surprise candidate. However, if the Conservatives had backed Tuomioja, strategic voting would have been unnecessary: the Conservatives and the SFP had enough votes to help him to the third stage. As Virolainen noticed, Tuomioja was less dangerous than Paasikivi, who was a likely Condorcet-winner.

In order to utilize strategic voting, or preference misrepresentation, in a plurality runoff system the actors have to know the entire preference profile of the other participants. Thus quite a lot of information was needed. The Agrarian leaders understood this: the legendary party secretary Arvo Korsimo is said to have been in personal contact with every 1 of the 300 electors before the final ballot. The other parties were much less effective: the Social Democrats refused to enter into discussion with the others before the election day, and Tanner even refused to be in the same room with the Communists (Skog, 1971, 375–376). Of the Conservatives, Erkki Tuomioja (the son of the Conservative candidate), has testified that

> for example, the SKDL [Communist] electors were considered to be like aliens from a different planet. [The Conservatives] neither wanted nor tried to study their thinking or aims. This led (...) to the impression that the SKDL would back Paasikivi, while the fact that the SKDL divided its votes—which was mentioned as a theoretical possibility—was a bitter surprise for the bourgeois groups. (Tuomioja, 1986, 248)

The Communists had two political objectives. Their aims were to ensure that the new President would continue the current foreign policy, and they wanted to break free from their parliamentary isolation. Both the first and the second objective ruled out Fagerholm and Tuomioja (at least according to the Communists' perceptions), the second ruled out Paasikivi, who had expelled the Communists from the government in 1948. In the negotiations, the Agrarian leaders told the Communists about their strategic calculations. The negotiators agreed that Paasikivi was more dangerous to Kekkonen than Tuomioja. If the Conservatives continued to back Tuomioja, the Communist strategy would be to support Kekkonen unconditionally. However, Paasikivi was a more complex case. The risk-minimizing strategy of the party was to support him in order to prevent the presidency of either Tuomioja or Fagerholm. Indeed, when a delegation of Finnish Communists visited Moscow before the election, the Soviet party representatives advised them to support Paasikivi. The reasons were that the Russians did not believe in Kekkonen's chances and that their attitude towards the Tannerian Social Democrats was almost paranoid.[9] On the other hand, as Hertta Kuusinen, an influential Finnish Communist, stressed, the election of Paasikivi would, because of his age, "just have postponed the decision" (Suomi, 1990, 486, 488). The Communists were likely to become kingmakers, and in those times, it was self-evident that they could not make a decision in an issue of this importance without the blessing of Moscow. The

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[9] The Russians were certainly aware of that the CIA financed the Social Democrats' fight against the Finnish Communists particularly in the trade unions. In the conditions of the Cold War, the Social Democrats became the Russians' main "enemy party" in Finland.

President was, after all, the key actor in the Finnish-Soviet relations. There is some evidence that the Russians were informed about vote-dividing plan at an early stage. They Russians were, however, divided between themselves. The Soviet Ambassador in Helsinki seemed to have favoured the less risky strategy of supporting Paasikivi while some younger members of the diplomatic and the KGB staff argued for Kekkonen. According to some commentators, the dispute was finally solved at the highest level of the Soviet hierarchy. It is certain that the Finnish Communists consulted the Soviet representatives again before they accepted the strategy invented by the Agrarians.

The Agrarian negotiators asked the Communists to divide their votes. In that strategy two risks were involved. Firstly: while Paasikivi would almost surely defeat any other candidate, Fagerholm had some chances against Kekkonen. To help Fagerholm to the final ballot might actually make him President, but without the tactical support of the Communists he would surely lose in the second ballot. Secondly: if the bourgeois bloc could anticipate the Communist strategy, it could also vote for Fagerholm and already make him President at the second stage, with the unintended help of the Communists (Virolainen, 1984, 282–286, 288–291). That would be an extremely embarrassing situation, and, as often before, the Russians would probably blame the Finnish Communists for their own misjudgements.

Both the ML and the Communist negotiators understood the basic nature of the situation, but they had certain incentives for misrepresenting it to their negotiating partners. The main task of the ML negotiators was to convince the Communists that the first risk was small.

> Maalaisliitto [ML] had to show sufficient guarantees that it had secured the seven extra votes necessary for the election of Kekkonen. If the SKDL had supported Kekkonen, but he were not elected in the final ballot (. . .) the party would indirectly have helped to elect the feared common candidate of the Right and the Social Democrats. At the same time, the main goal in the elections, which could have been reached by supporting Paasikivi, namely to secure the continuation of the present foreign policy, would not have been reached. Therefore they unambiguously told to Maalaisliitto, that if guarantees for a sufficient support for Kekkonen were not given, the Paasikivi alternative should again be taken into consideration. (Suomi, 1990, 489.)

The ML negotiators claimed that they could secure Kekkonen's victory over Fagerholm:

> The Finnish People's Party has informed us, said Sukselainen [the ML party leader, to the Communist negotiators], that they will not vote for Paasikivi or Tuomioja in the second election. At the same time, they have made it clear that if Kekkonen and Fagerholm are in the third ballot, five of them will vote for Kekkonen. As, continued Sukselainen, according to my information, five of the Swedes will cast their vote for Kekkonen, that should be enough for victory (. . .) Kleemola [another ML negotiator]: "Now 13 votes are needed, for Fagerholm to beat Paasikivi in the second ballot." (Virolainen, 1984, 288–289.)

Sukselainen's predictions were wrong: the Finnish People's Party did support Paasikivi in the second ballot, and probably only one or two of the SFP electors supported Kekkonen in the third. It is most likely that Sukselainen intentionally

overestimated Kekkonen's chances: the Communists did not have a direct information channel to the bourgeois parties. They had to rely on the information given by the Agrarians. Suomi (1990, 495) claims that the Communists actually doubted the figures given by Sukselainen, but still believed that a majority could be attained.

The Communists also had an incentive to exaggerate their willingness to consider Paasikivi as an alternative to Kekkonen so as to get concessions from the ML:

> Paasikivi is, of course, a lesser evil from our point of view than Tuomioja or Fagerholm. I am afraid, said Hertta [Hertta Kuusinen, the Communist negotiator], that we could not get a group decision to vote both for Kekkonen and Fagerholm in the second ballot. I think that this was tactics from Hertta's side, for she knew the situation and surely understood what the issue was. (Virolainen, 1984, 289.)

The final agreement between the parties was reached almost at the last moment:

> Korsimo [the Agrarian party secretary] told us very nervously that the Socialists were going to do the same trick for us as we were planning for them; they would divide their votes between Paasikivi and Fagerholm, and in the last election there would be Paasikivi against Kekkonen. He also reported that Kekkonen hopes that they would really divide their votes between Kekkonen and Fagerholm. In the end, Kuusinen promised clearly and without any ambiguity that they would do that. . . (Virolainen, 1984, 291.)

Again, this was most likely a means of putting pressure on the Communists. Probably Korsimo did not have any new information about the strategy of the Social Democrats. The last message from them recorded by Virolainen was that their decision not to drop Fagerholm was still in force (Virolainen, 1984, 290). Nevertheless, the situation was delicate. The Social Democrats could neutralize the Communist's planned strategy by casting more votes for Paasikivi than the Communists were going to cast for Fagerholm—as the Agrarians themselves did in 1931. Instead of doing that, the Social Democrats confirmed their original decision to support Fagerholm. *If* the Communists could rely on this decision, the danger that Paasikivi would, after all, enter the last ballot could be ignored. But there was still a possibility that the bourgeois bloc would detect the Communists' strategy and decide at the last moment to vote for Fagerholm. If the Communists believed this, they should, after all, have cast all their votes for Kekkonen. Then the Conservatives' best choice would have been to vote for Paasikivi. . . Given the sincere strategy of the SDP—to support Fagerholm as long as he was running—all possible strategies of the SKDL and the KOK were vulnerable for strategic countermoves; *there were no equilibrium strategies*. Virolainen has recalled in an interview how the Conservative and the SFP negotiators came to inform him that they were going to bring in Paasikivi:

– Are you unanimously behind Paasikivi? Virolainen asked the negotiators. The men assured him that this was the case.
– Have you really made decisions on the issue? Aura [the Conservative negotiator] and Öhman [the SFP negotiator] assured him that the groups had made binding decisions.
– Happily they didn't understand what I was asking, Virolainen said and shook his head.
– If the other groups had grasped our plot and already voted for Fagerholm in the second ballot, Fagerholm would have become President. (Lehtinen, 1982, 87.)

According to the Conservative Saukkonen, the others actually did anticipate "the plot". But they could not be sure that the Communists would really act strategically. For the Communists, Fagerholm was a much worse alternative than Paasikivi, and the Conservatives obviously hoped that the Communists would be willing to accept the old man in order to preclude Fagerholm (Saukkonen, 1973, 253; Tuomioja, 1986, 284). The Conservatives contacted the Communists and asked whether they would be willing to support Paasikivi, but "no clear answer was given. In the (Conservative) group this created some doubts about the result" (Saukkonen, 1973, 253).

It is interesting to compare the Communists' strategy with that adopted by the Social Democrats in the 1931 elections. Then, the party made a decision to divide its votes in the second round, if necessary. But it also made its decision public, and even revealed the number of votes it was reserving for tactical use. Their antagonists among the Agrarians used that information to neutralize the strategy. In 1956, the Communists promised their support to their coalition partners only at the last moment, although their leaders had probably made the decision some time before (Suomi, 1990, 495). The Communists had also hinted to the Social Democrats that they might be willing to support some other Leftist candidate than Fagerholm—again, it is impossible to tell whether this was an additional camouflage or whether the Communists were actually considering this alternative, too. Skyttä (1970, 107) claims that after making the decision formally in their group, the Communists "closed themselves, sound-proof, into their room. No one could go in or out before the bell rang". Postponing the formal decision and cutting themselves off from further discussions can be seen as means for keeping their opponents in uncertainty. But the Agrarians did not close their doors, and, as Virolainen tells us, "the plan leaked". However, the Conservatives also felt that they had committed themselves by asking Paasikivi in the first place. They could not simply change horses again during the race (Saukkonen, 1973, 253). Thus both the Social Democrats and the bourgeois bloc had tied their hands, and the Communists were free to move.

Alan Gibbard has written, quite provocatively, that honest voting exists "in virtue of individual integrity, ignorance or stupidity" (Gibbard, 1973, 593). All these factors might have some role in explaining why neither the bourgeois bloc nor the SDP voted strategically in the second round. "Integrity" as such was not central. Although Kekkonen's opponents were morally outraged by the Communists' stratagem, we have seen that they themselves were quite willing to make calculations in the light of different strategies. Ignorance, however, seems to have been the key factor. There was an informational asymmetry between Kekkonen's supporters and his enemies, resulting from the Agrarians' ability to collect information and the Communists' ability not to reveal information. "Stupidity" also had a role, not at the individual but at the organizational level. Due to their heterogeneity, it was difficult both for the Social Democrats and the bourgeois bloc to agree on a common strategy.

However, the ML-Communist coalition could not be absolutely sure that the others would not vote strategically. And it was a matter of degree: while majorities were likely to follow the group decisions, individual electors could still "defect".

When the fundamental agreement between the ML and SKDL on the strategy to be applied was reached, there was still the question of *how many* Communist votes had to be transferred to Fagerholm in order to throw Paasikivi out of the game. Kekkonen's old friend Kustaa Vilkuna who acted as an intermediate between Kekkonen and the Soviet representatives wrote that Fagerholm needed 10 extra votes (Majander, 2010, 101). Actually, that was not enough. On the supposition that the other groups would vote according to their decisions, at least 13 votes were needed, as the ML-negotiator Kleemola remarked. In the final negotiations between the ML and the Communists, Kuusinen promised 29–30 votes for Fagerholm. At the last moment, she told Kekkonen that Fagerholm would get 30–40 Communist votes. The actual number was 42. Thus, the number was constantly moved upwards. Why?

The optimal number can be counted in the following way. Firstly, there was the danger that some outsiders would cast their votes for Fagerholm who had 72 electors of his own. 151 votes were needed for victory; the Communists should take care that the total number of Fagerholm's votes was less than that. If k was the number of extra votes coming from the Communists, and m the number coming from the others, the first condition for k was:

$$72 + m + k < 151.$$

From this we get

$$79 - m > k.$$

On the other hand, some Social Democrats could vote for Paasikivi, n of them. If they didn't, only 13 extra votes were needed (supposing that Paasikivi had the support of the 84 electors of the bourgeois bloc). Thus,

$$k > 12 + n.$$

The last condition for the optimal size of k was the requirement that Kekkonen should not get fewer votes than Paasikivi. Thus,

$$84 + n < 144 - k,$$

from which we get

$$60 - n > k > 12 + n.$$

For example, if the Communists estimated that over 20 Social Democrats might defect to Paasikivi (so that $n > 20$), the optimal size of k would be less than 40 but more than 32. There was some discussion on the optimal size of k. When Kekkonen heard that he would get 30–40 extra votes, he "warned us to take care that

Fagerholm would not get too many votes in the second election" (Virolainen, 1984, 292).

The fact that Fagerholm got 42 extra votes while 13 would have been enough shows that the Communists estimated the risk that some Social Democrats would vote for Paasikivi as higher than the risk that some bourgeois electors would vote for Fagerholm. Given the preferences of the parties, this was reasonable. In the Social Democratic Party, there *was* a group which had initially opposed Fagerholm's candidacy and was eager to throw him over board. This group included Tanner and his supporters. On the other hand, the Communists did not expect more than 17 defections from the SDP. Among the bourgeois groups, only the Swedish-speaking group (SFP) had some initial sympathy for Fagerholm (Meinander, 1978, 149). Even if it had cast *all* its votes for him (so that $m = 20$), it would not have been enough. Moreover, the representatives of the Conservatives and the SFP had just assured Virolainen—who certainly passed the information to the Communists—that their groups would stay unanimously behind Paasikivi. In spite of Kekkonen's fears, it was reasonable to make k relatively high. Suomi (1990, 495–496) states that the Communist leaders Murto and Ryömä "counted very carefully", and gave personal instructions to every elector. On the whole both the ML and SKDL played the game with great strategic sophistication.

7.2.11   The Elections in 1982 and 1988: The Limits of Manipulation

Not all presidential elections in Finland have been as dramatic as those discussed above. In many cases, the President has been elected even in the first round, and often by large majorities. However, it is possible that even in those cases elements of instability have been under the surface, although the evidence for this is of a more speculative nature than in the earlier cases. Consider the elections in 1982, when the Social Democrat Koivisto was elected to succeed President Kekkonen by the combined forces of the Social Democrats and the more Euro-Communist elements of the Communist party. The election itself was an undramatic event and the outcome was predicted by most observers. Koivisto was generally perceived as the most popular Finnish politician, widely respected even outside his own party (sometimes, one might even say, especially outside his party).

Before the election, however, a complex manoeuvre was started behind the scene to make the Director of the Central Bank, the former Prime Minister Ahti Karjalainen President. Karjalainen describes the manoeuvre in his memoirs:

> The tactics were to form a new K-line [the name used for the groups which supported the former President Kekkonen; my addition] which would consist of the Centre [the former Agrarian party], the Conservatives, the Communists and the Christian Party [a small conservative group]. These all had their own aims, but cooperation would benefit all of them.

> The Conservatives wanted to be in the cabinet, the Centre wanted its representative to become President, the Communists wanted to prevent the Social Democrats from attaining hegemony among the Left, and the Christians wanted to become a party with an acceptable image in foreign policy. With them one could add few votes from the Liberals and the Swedes [the Swedish People's Party]. It seemed that such a united front could gain a majority, even if the Christians dropped out. (. . .) The plan (. . .) was based on the idea that I would be the only person who could act as the leader of such a coalition. (Karjalainen & Tarkka, 1989, 239)

It is no surprise that a coalition consisting of such heterogeneous elements collapsed; but the failure was also related to Karjalainen's bad public image and the voters' general contempt for political stratagems. Karjalainen was generally seen as a second-rate politician: ambitious but weak. Moreover, he was rumoured to have a serious alcohol problem. (These rumours were substantially true.) Karjalainen's plan received a lethal blow when his supporters failed to reach a majority in the party caucus of his own party, the Centre. The party nominated Dr. Johannes Virolainen, Karjalainen's old rival, to be their candidate. After that, Karjalainen's most loyal supporters in the Centre and in the Stalinist wing of the Communist Party still entertained the possibility of bringing him in as a "dark horse" in the Electoral College. Their reasoning was the same as in the passage quoted: any candidate would need—like Kekkonen in 1956—the Communists' support, and Karjalainen was the only non-socialist candidate acceptable to them.

However, the plan, when made public, had a counter-productive effect. Many of the Centrist and Conservative voters did not trust Karjalainen: even for them, Koivisto was clearly the second-best choice. At least some of them certainly voted for Koivisto mainly in order to ensure that Karjalainen would not be elected. Social Democratic campaigners frequently made negative references to Karjalainen's possible candidature in order to stress that a vote for Koivisto was the only sure choice. And it seems there was some truth in their allegations. Although the Centre and the Conservatives officially denied that the "dark horse" possibility was even considered in the Electoral College, the Conservative leader Suominen later admitted that had there been a second ballot in the electoral college in 1982, Karjalainen "might had been considered as one possibility" by the Conservatives (*Iltasanomat*, 26th November, 1997).

During the electoral campaign, the Conservatives and the Centre accused each other of secretly preferring the Social Democrat, Koivisto, to a common non-socialist candidate, while remaining vague on the question of how they themselves would behave were their own candidate not to enter the last stage. Both parties were in a trap. Their traditional voters were divided. Those voters who thought strictly in terms of the Right-Left-dimension preferred a common non-socialist candidate to Koivisto as the second-best alternative, while those impressed by Koivisto's personal qualities preferred him over any other candidate except their own. An opinion poll, published in the 9 January 1982 showed that of those voters who preferred Virolainen (the Centrist candidate), 32 % mentioned Koivisto (the Social Democrat) and only 30 % Holkeri (the Conservative candidate) as their second choice, while of those who preferred Holkeri, 30 % mentioned

Virolainen and 29 % Koivisto as their second choice. Thus, almost a third of the supporters of Virolainen or Holkeri rejected the Right-Left dimension. In the preferences of the voters, Koivisto was clearly a Condorcet winner, even though not an absolute (first preference) winner. Knowing this, the candidates and the party leaders could not reveal their second preferences. By declaring that they would support a common non-socialist candidate if their own candidate were dropped, they might alienate those non-socialist voters who were attracted by Koivisto's personality and considered him as the second-best. On other hand, by publicly endorsing Koivisto as the second-best alternative, they could lose those voters who thought in traditional Right-Left terms and preferred any common non-socialist candidate to the Social Democrat Koivisto. By giving either answer, they might risk about a third of their traditional supporters. In a TV-debate, Virolainen and Holkeri simply refused to answer the "unfair" question of what their electors would do in the case that they themselves failed to enter the last ballot. Probably their silence also worked for Koivisto. In the mind of the public, the generally unpopular idea of bringing in Karjalainen or some other "dark horse" had raised its head again.[10]

In the elections for the Electoral College, both parties, the Conservatives and the Centre did rather badly, while the Social Democrats won a landslide victory (144 electors; seven short of a majority). The Euro-Communist wing of Communists put an end to speculations by already backing Koivisto in the first stage. Symptomatically, the same role was played by the majority of the Conservatives in the election of 1988, when the situation was more or less similar to that of 1982, and Koivisto was re-elected. In the latter case, the accusations made by the Centre were correct. When the troublesome question of the second preferences was raised again in a TV-debate before the 1988 elections, the Conservative candidate, Holkeri, admitted that would he not enter the last ballot, the re-election of Koivisto would be a sensible alternative. Many commentators have claimed that this honest answer was one of the main causes of the Conservative setback in the 1988 presidential elections.

A part of the result of the election in 1982 can be explained in terms of the problem described above. The non-socialist parties simply had no convincing answer as to how they would behave if they could not get their most preferred candidate into the third stage. *The voters had learned the rules of the game*; they had recognized the importance of strategic voting and of the possibility of agenda

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[10] Rallings, Thrasher and Cowling (2002, 77) describe an analogous publicity problem when the supplementary vote-system (which allows the expression of second preferences, see Sect. 3.2.4) was used for the first time in the London mayoral elections: "Leading party politicians were asked, given the candidates contesting the particular election, how they personally would cast the second, supplementary vote. This was a trick question that some failed to spot. If they replied that they would support only their own party on the first and second votes they were, in effect, acknowledging that their second vote would be a rejected vote and could not count towards final outcome. (...) Finally, if their answer implied that they would cast a second vote for a candidate from a rival party then that would be interpreted as an expression of party disloyalty. The question, of course, although designed to embarrass unwary politicians, did reveal some inconsistencies of the SV system."

manipulation. Some of them certainly ranked Koivisto as only the second best, but voted for him nevertheless, in order to prevent the election of a third best candidate, or of some unknown "dark horse".[11] This example shows how complex strategic calculations may have an effect on the result even when they are not implemented.

7.2.12   Social Choice Implications

The study of the history of the Finnish presidential elections seems to provide surprisingly strong support for the "Riker Conjecture". In four cases out of ten, significant strategic voting occurred. In one case (1956), a likely Condorcet-winner was ruled out by strategic voting. There were two, possibly three, cases of preference cycles (1931, 1937 and 1956). In two cases (1925 and 1956), the agenda (the set of candidates actually voted on), was formed only after a complex bargaining process. All the elections (1925, 1931, 1937 and 1956) were described as "surprises" by contemporary commentators.

All the four cases were politically important. In 1931, as well as in 1937 and 1956, the result clearly determined the nature of subsequent governmental coalitions: both in 1931 and 1956, the Social Democrats, who had opposed the winning candidate, were excluded from the Cabinet, while in 1937 they became, for the first time, partners acceptable to the Centrist parties. More speculatively, it might be argued that in 1931 a different outcome could have led straight to a Right-wing coup—an actual attempt in 1932 failed mainly because the Conservative President by his personal authority was able to hold the Right in check. In 1956, the election of Fagerholm as president could have triggered a serious crisis in Finnish–Soviet relations. Such a crisis emerged when Fagerholm became the Prime Minister of the short-lived Conservative—Social Democrat cabinet two years later. Given the strong constitutional position of the President in Finland, the choices of individual actors had an immense practical importance. The problems studied by the social choice approach are not mere curiosities.

Strategic voting, agenda manipulation and the resulting political disequilibria do exist in the real world. Had the actors in our case reasoned in a slightly different way, almost anything could have happened: in 1956 the election of any of the four candidates (Tuomioja, Paasikivi, Fagerholm and Kekkonen) could have been the outcome of the social choice. Some authors have claimed that significant strategic voting is not a real possibility, since opportunities for manipulation which theoretically exist can be ruled out for all practical purposes. Voters do not have enough information to calculate their winning strategies, but if they had, manipulation would become virtually impossible since everybody would then know the sincere

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[11] On the effects of the 'dark horse' possibility, see the opinion measurement results and the related discussion in Sänkiaho (1983), 142–143, 171–175, 344–345.

preferences of everybody else. This argument would explain why there are so few real-life examples of successful manipulation.

However, this argument is not fully convincing. Firstly, there is no a priori reason to suppose that the distribution of information is symmetrical. For institutional and psychological reasons, some parties and individuals are more able to collect *and* hide information which can be used for strategic purposes. Secondly, politicians, like market dealers, are often gamblers by nature; when stakes are sufficiently high, they are willing to take risks and act on limited information. In 1956, for example, the Communist and the Agrarian party machines were famous for their efficiency. Both parties were dedicated to the victory of their common candidate, although they certainly were aware of the risks involved. The bourgeois parties and the Social Democratic group were internally divided and hesitant. For these reasons, they did not work effectively to get sufficient information and form a rational strategy based on it. Such asymmetries are themselves an essential part of the political game.

From a practical point of view, there are several aspects in the case which complicate the modelling task. In complex situations like the ones discussed here, parties develop an intensive division of labour. They delegate the task of formulating a strategy to a small group of negotiators, and the other members have to rely on the information provided by them. This does not, however, guarantee that the parties always act as units. It is not always easy to identify the basic actors: sometimes they are the parties, sometimes party factions or even individual members. There can be significant differences in the "rationality" of various actors. The cohesiveness and/or voting discipline within the political groups varies greatly. Because of internal disagreements, *the groups need not have well-defined preferences over the entire set of candidates*. A fruitful explanation of the asymmetries is that while the basic actors making social choices in the real world are usually groups (parties, party factions, electoral alliances and coalitions), their preferences and strategic choices are themselves the products of social choice processes within the groups. Sometimes, the official candidates have been elected by narrow majorities or mere pluralities in the party organs. The counter-productive behaviour of the Social Democrats in 1956 and of the SFP group in 1937 can be explained in those terms. A realistically-oriented theory of social choice should try to take this multi-level nature of decisions into account.

Intra-party bargaining is sometimes as important as the more visible inter-party bargaining, and these two games can affect each other. In the 1956 case, all the major parties speculated that some of the others might split. Moreover, the preferences of the parties are partially interdependent. For example: one reason why the Conservatives could not support Kekkonen was that the Communists did support him. It has often been claimed that some bourgeois electors voted for Fagerholm mainly because they disliked the Communists' stratagem. Equally, Paasikivi became less acceptable for the Communists because his candidacy was initiated by the Conservatives. Finally, there was the cooperative aspect. Although binding commitments could not be made, future political cooperation was inevitably brought into discussions, and it was common knowledge that a coalition supporting

a victorious candidate was likely to form the core of the next government. Thus, the preferences of the parties could not be described simply as preferences between candidates running for the presidency. Rather they were preferences between complex packages which often contained additional elements. Other issues were relevant but it is very difficult to assess their real weight.

For reasons such as these, the direct relevancy of the social choice theorems is not easy to detect in particular cases. This does not mean that they are useless for descriptive purposes, but their role is retrodictive rather than predictive. In cases such as the Finnish presidential elections in 1925, 1931, 1937, and 1956, there is no question of a predictive model—indeed, the social choice theory tells us that the situations were essentially unpredictable. This "non-prediction" is in accordance with the subjective perceptions of the actors. The heuristic value of the basic supposition—namely that politics can be seen as a strategic game played by more or less rational actors—is still considerable in understanding what happened. Finnish historians and journalists have discussed at length "the decisive vote" given for Kekkonen in the last round in 1956. The social choice approach stresses that it is equally interesting to ask why the 299 remaining electors voted as they voted. I think that it is time for formalists and historians to take each other seriously. I also think that the case of the Finnish presidential elections in 1956 deserves to become a classic among those who want to continue the line of research opened up by Arrow, Riker and others. But it should be noticed that the cases discussed above could equally be used to support Nicholas Miller's (1983) and Anthony McGann's (2006) thesis that "pluralistic" instability ultimately upholds *systemic* stability. Up to 1937, the Social Democrats were mainly excluded from the governments, and this policy was reinforced in the 1931 election; Conservative President Svinhufvud categorically refused to accept them as equal political partners. In 1937, however, the Social Democrats successfully combined their forces with the Agrarians, and replaced Svinhufvud by the Agrarian Kallio. Consequently, the SDP entered the government and remained there for about 20 years. Similarly, the Communists' successful participation in the election of President Kekkonen in 1956 opened the road which finally led to the Agrarian-Social Democratic-Communist government in 1966. In both cases, hopes for further cooperation "generated incentives for moderate political behaviour" (to quote Miller, 1983, 736) and, in the long run, stabilized the Finnish democracy. First the Socialists and then the Communists were integrated into normal politics. If my analysis of the cases is correct, it was just the underlying decisional instability which, in the long run, increased the stability of the Finnish society.

7.2.13   Comparing Two Electoral Colleges

A Rikerian would argue that the Finnish system was unique because it made relatively easy the *revelation* of the underlying situations of disequilibrium. A sceptic may answer that it was unique because—together with some other peculiar

properties of the Finnish society—it *produced* these situations (Mackie, 2003, 362–363). The complex system of an indirect election with multiple parties and several ballots forced the electoral groups to form more complex preference orderings and invited manipulative strategies (One comment I heard when presenting my examples was: "So, one has to go as far as to Finland in order to find a real-life example of these phenomena".) I think that this sceptical attitude is partly correct. However, it does not follow that the social choice results are, after all, just "mathematical curiosities". For while the cyclical configurations may be a Finnish specialty, other comparable institutions may have social choice problems of their own. *They may suffer from these problems for the very reason that they have effectively eliminated the possibility of cycles*. One way to proceed is to compare the Finnish Electoral College with other institutions designed for the same purpose. In the nineteenth and the early twentieth century, almost all republics elected their Heads of the States by using indirect means—the notorious exceptions to this rule were the elections of both Napoleons. After the Second World War, most presidential regimes, following the lead of the French Fifth Republic, opted for direct election. In the 1980s, there were only four countries still relying on the old device of the Electoral College: Taiwan, Finland, Argentina, and the United States.[12] Leaving aside the turbulent history of the Argentinean elections and the one-party dominated Taiwan, the US system provides us with the nearest point of comparison.[13]

In the USA, as in Finland, a separate electoral college emerged as a compromise solution between a direct election and an election by the Senate/Parliament. In both countries, the actual workings of the electoral colleges have radically diverged from the original intentions (or, at least, of public justifications) of their creators.[14] In the USA, as well as in Finland, the official justification of the indirect election was that the College would be capable of making independent and considered judgments about the merits of the various candidates. As was mentioned in Sect. 2.1.4, indirect elections were widely used in various representative contexts before the twentieth century to counterbalance the general (male) suffrage. The electoral colleges were supposed to act as independent deliberative bodies, isolated *both* from the popular pressures *and* from the daily parliamentary politics. In the USA, however, the relationship between the electors and their constituencies developed into a *de facto* imperative mandate, and the election process became a sort of direct election. In Finland, the election of the President was incorporated into the normal power struggle between the parties. In the cases discussed here, the direct influence of the voters was minimal, but this did not make the College more deliberative. In both countries there has been a wide dissatisfaction with the methods by which the

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[12] Since the 1980s Taiwan, Finland and Argentina have abolished their electoral colleges; Estonia has adopted one.

[13] For a lucid presentation of the workings (and peculiarities) of the US system, informed by the theory of social choice, see Nicholas R. Miller (2012).

[14] On the history of these compromises, see Longley and Braun (1975) for the USA, and Stolpe (1997) for Finland.

Presidents are chosen, but, due to the unusually rigid constitutions of both countries, the practices have survived. In the USA, several hundred proposals for amending the election method have reached the Congress floor (Longley & Braun, 1975), while in the Finnish *Eduskunta* there have been a more modest number of 59 amendments proposed between 1920 and 1984.

In the early days of the republic, the United States had two experiences of "Finnish type" presidential elections. Both the College and the House make their choice by using the absolute majority rule. In the presence of three or more candidates, the rule is potentially indecisive. Without a majority in the Electoral College, there would be a great potential for political horse-trading. In 1801, the Electoral College could not reach the required majority, and the election fell to the House. After 36 ballots and several deals and maneuvers, Thomas Jefferson was finally elected. This was partially due to his old antagonist, Hamilton, who hated only Jefferson's competitor, Burr, even more (for an account informed by the theory of social choice, see Nagel, 2007). In 1824, in spite of Andrew Jackson's plurality (42.2 % of votes), Adams was elected in the House, because of a deal made with Henry Clay, whom Adams appointed the Secretary of the State (Longley & Braun, 1975, 32, 36).

In these early cases, most electors were still nominated by the state legislatures. For the first elections, the States experimented with a variety of methods of choosing the electors. For example, Massachusetts altered the system seven times in the first ten elections, often for partisan interests (Dahl, 2003, 82). In the first part of the nineteenth century, the US system was modified in two important ways, without formally amending the Constitution. First, a direct election of the College became a norm, second, the unit rule was established—mainly because it favoured the majority party in each state (Best, 1971, 23). After these changes, all the Presidents of the United States have been elected in the College by an absolute majority of *electors*. Unlike the Finnish system, based on proportional representation, the unit rule has invariably produced unambiguous majorities, and all the strategic maneuvering has been channelled into the primary election-process. But the majorities in the College have often been "manufactured" ones, resulting from the winner-takes-all nature of the unit rule rather than the existence of a popular majority behind one candidate.

In the United States, the number of viable candidates has been smaller than in Finland. Again, this is one of the predicted effects of the unit-rule version of plurality. Nevertheless, there have often been more than two "serious" competitors in the US presidential elections. The mechanics of the unit rule can be illustrated by examples:

Year of election	Candidates (the winner *italicized*)	Percent of votes	Percent of electors
1824	Jackson	42.2	38
	Adams	31.9	32
	Crawford	13.0	16
	Clay	13.0	14

Year of election	Candidates (the winner *italicized*)	Percent of votes	Percent of electors
1848	*Taylor*	47.3	57
	Cass	42.5	43
	Van Buren	10.1	–
1856	*Buchanan*	45.6	59
	Fremont	33.3	39
	Fillmore	21.1	3
1860	*Lincoln*	39.8	59
	Douglas	29.4	4
	Breckinridge	18.2	24
	Bell	12.6	13
1876	Tilden	50.9	50
	Hayes	47.9	50
	Others	1.1	–
1888	Cleveland	48.6	42
	Harrison	47.8	58
	Fisk	2.2	–
	Others	1.4	–
1892	*Cleveland*	46.0	62
	Harrison	43.0	33
	Weaver	8.5	–
	Others	2.4	–
1912	*Wilson*	41.9	82
	Roosevelt	27.4	17
	Taft	23.2	2
	Debs	6.0	–
	Others	1.6	–
1916	*Wilson*	49.3	52
	Hughes	46.1	48
	Benson	3.2	–
	Others	1.5	–
1968	*Nixon*	43.4	56
	Humphrey	42.7	35
	Wallace	13.5	9
1992	*Clinton*	43.3	69
	Bush	37.7	31
	Perot	19.0	–
2000	Gore	48.3	50
	Bush	48.0	50
	Others	3.7	–

We can make two observations. First, the American electoral results have varied in a rather arbitrary way.[15] In 1856, 1860, 1912 and 1992 some candidates with one-fifth of the popular vote or more had only a handful of electors (or none). Van der Hout's and McGann's non-negative responsiveness condition for seat allocations (see Sect. 3.5.4) was clearly violated. For example, in 1912, Woodrow Wilson had a landslide majority (82 %) in the Electoral College. In 1916, his majority was significantly smaller (52 %). Still, in 1916 his share of the *popular* vote was larger than in 1912. In 1888, Cleveland lost to Harrison in the College in spite of the fact that he was the plurality winner; while in 1892 he was elected by a 62 % majority in the College although he received a proportionally smaller share of votes than in 1888. The presence of a relatively strong third candidate seems to magnify the victory of the plurality winner. In 1860, 1876, 1888 and 2000 the plurality-ranking criterion (Sect. 3.5.4) was also violated: candidates with a smaller share of votes won more electors than their competitors. Theoretically, (i) in a contest between two candidates, one might win a majority in the College with no more than ca. 25 % of the popular vote total, and (ii) in a contest between three or more candidates, a nationwide plurality winner might be unable to win a single elector. Alternatively, (iii) a nationwide plurality winner could sweep all of the College. This disproportionality is clearly visible in our sample, although the "worst" real cases fall short of these theoretical extremes (These problems of two-stage procedures have already been discussed in Sect. 2.2.3).

Second, as we have seen, the plurality system (including the unit rule version) often violates the Condorcet criterion (Sect. 3.2.3). According to Colomer (2007), the US system has failed to choose the popular Condorcet winner in 11 cases out of 45 elections held in the period 1828–2004. At least two of these cases have been subjected to a more detailed social choice analysis. In 1912, Theodore Roosevelt, after failing to become the Republican nominee, ran as an independent Progressive candidate. The Republican votes were divided between him and Taft, and this division of votes caused the landslide victory of Wilson. According to Brams (1976) and Riker (1982), while Roosevelt would have won a runoff election, Taft was the likely Condorcet winner (and the plurality winner Wilson, who got 82 % of the electors, an absolute loser). In their analysis of the election in 1860, Tabbarok and Spector (in an article provocatively entitled as 'Would the Borda Count have avoided the Civil War?') argue that the winner, Abraham Lincoln, would have lost to Stephen Douglas under almost any alternative electoral system—although in actual elections Douglas gained only 4 % of electors! If the authors are right, a majority of voters preferred even John Bell to Lincoln. John Breckinridge, the pro-slavery candidate, could not have won under any minimally democratic

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[15] This is a general property of the unit rule. V. O. Key remarks that in the Georgian primaries conducted under the unit rule "no uniform relation seems to exist between proportion of popular votes polled by candidates and their proportion of the unit vote" (Key, 1950, 419). The actual maximum over- or under-representation produced by the unit rule in the Georgian primaries was about 40 %. This is near the theoretical maximum which is slightly less than 50 % in a two-candidate race.

electoral system, but his candidacy was essential to Lincoln's victory.[16] In a two-man race with Lincoln, Douglas would have received most of Breckinridge's votes. Some have even argued that Breckinridge's candidacy was a calculated attempt to divide the anti-Lincoln vote and, ultimately, to create polarization which would break the country (Jenkins & Morris, 2006).

7.2.14   Conclusion: The Trade-Off Again

In terms of any reasonable theory of political representation, the US Electoral College is certainly a disaster. But, unlike the Finnish system, the unit rule almost invariably produces clear majorities, thus concealing the indecisive nature of the multi-candidate majority rule applied in the college. This is directly related to the tendency noticed above: if there are more than two candidates with a significant popular support, but no majority -winning candidate, the unit rule tends to ex-aggerate the support of the plurality winner. It is likely to make the popular plurality winner the majority winner in the college.[17] *This is a consequence of the plurality-like rules' strong tendency to violate the Arrovian rationality and independence requirements.* Not only voters' preferences, but the agenda, or the number of candidates (for example, Ralph Nader's candidature in Florida 2000) and the overall distribution of votes between them may have an impact on the outcome. For this reason, the unit rule also invites voters to vote strategically when there are more than two candidates. And, for the same reason, it probably violates the Condorcet criterion quite often.[18]

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[16] See Tabbarok and Spector (1999). Riker (1982) argues that in 1860 there was a Condorcet cycle. In their above-mentioned article, Tabbarok and Spector criticize this claim but agree that Lincoln was not the Condorcet winner.

[17] The anomalous cases in which the unit rule produces a majority for the runner-up rather than for the plurality winner (in 1876, 1888 and 2000) have appeared when there has been only two strong candidates and the election has been a close one. Contrary to what might be expected, the presence of a third "serious" candidate (a candidate collecting more than 10 % of the popular vote) tends to produce a landslide victory for the plurality winner. In this respect the unit rule has behaved unlike the first-past-the-post rule in parliamentary elections. The latter has produced "spurious" majorities mainly in three-cornered contests (Siaroff, 2003). Abramson et al. (1995) estimate that, in spite of some strategic voting, the presidents elected in 1968, 1980, and 1992, (Nixon, Reagan, Clinton) were likely Condorcet winners and the third-party candidates (Wallace, Anderson, Perot) were likely absolute losers. On this basis, they argue that "it would be difficult to argue that the electoral system led to a pernicious result" (p. 363); but this was written before the 2000 election.

[18] Dyck (2004) argues that the fundamental arbitrariness of the U.S. presidential election system is related to the logic of the plurality rule, not to the indirect election. This is basically true. However, as the Finnish case shows, alternative forms of indirect election may produce different forms of arbitrariness when they fail to manufacture a majority in the College. Moreover, if they *are* able to manufacture majorities, they may, like the US system, also manufacture a "spurious" majority. Siaroff (2003) gives examples of spurious majorities produced by the runoff- and AV-rules.

As a contrast, the Finnish PR-method has produced very proportionally composed electoral colleges. The college itself has picked the popular majority winner if there has been one (as in 1950, 1968, and 1978). And, if there was no clear popular first-preference majority winner, but a prospective popular Condorcet winner had a wide plurality, the college invariably elected him. In 1982 as well as in 1988, Koivisto was elected, first with the help of the Communists, then with the help of the Conservatives! In spite of Karjalainen's plans, the dark horses were kept in their stables. One reason for this was certainly the general perception that—even without an absolute majority—Koivisto was certainly a popular Condorcet-winner. Similarly, in 1962, the Conservatives cast their votes for the victorious Kekkonen after the withdrawal of the Conservative candidate. In 1968, the Social Democrats rejected the Populist leader Veikko Vennamo's proposal to throw Kekkonen overboard and to unite the Conservatives, the Social Democrats, and the (surprisingly successful) Populists behind a common Social Democratic dark horse. In all these cases, the parties did not dare to reject a candidate who was a likely popular Condorcet winner, although it would have been legally possible. In those cases, the "will of the people", as sensed by the party leaders, excluded further manipulative moves. This might actually provide one justification for the use of indirect elections: when there is no popular first-preference winner, an elected body might interpret the "will of the people" and find a candidate who would be most acceptable to most voters (as in Estonia 1992, see Sect. 3.2.3).[19] However, when there was no clear Condorcet winner, as in the cases discussed above (in 1925, 1931, 1937 and 1956), the Finnish system behaved in a very unpredictable way. Both the US and the Finnish system may exhibit *quasi-chaotic* behaviour—"chaotic" in the sense that very small, unpredictable perturbations like the performance of the vote-counting system in Florida, or the strategic perceptions of a handful of electors in the Finnish Electoral College, may sometimes change the outcome. Given the political position of the Presidents in both countries, these are not minor issues.

As was argued in the earlier chapters, the impossibility-results establish a *trade-off between different criteria of fairness in electoral systems*. Single-member systems and the unit rule are *decisive* in the sense that they usually produce clear first-preference majorities in the elected assemblies; there is no room for cycles and for strategic voting within the College. The cost is that the resulting majorities are sometimes produced by interplay between the electoral rules, the agenda, and the strategies chosen by voters. Systems of proportional representation—like that used in electing the Finnish Electoral College—provide very little incentives for strategic voting at the electoral level and the composition of elected assemblies reflects voters' first preferences quite faithfully. The election process is likely to satisfy

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[19] In all these cases, the practical conditions discussed by Shugart and Taagepera (1994), O'Neill (2007) and Budge and McDonald (2009) were satisfied: the leading candidate received almost a half of the popular vote and his lead to the runner-up candidate was clear. In those circumstances, there were good reasons to suppose that he was a popular Condorcet winner, too.

Arrow's independence and rationality requirements. But the cost of that alternative is that when there are no popular majority winners or clear Condorcet winners, the electoral outcome puts very few constraints or guidelines for the further choices made in the elected assembly, and the final outcome may be quite unpredictable. To quote John Bonner (1986, 92), in PR systems "there are no incentives for tactical voting or for pre-election agreements. All the sophistication and vote trading has to be left to the parties *after* the polling day." For this very reason, according to Shepsle and Bonchek (1997, 191), the plurality systems "resolve many conflicts *before* legislative politics commences", while proportional systems "*reflect* rather than *resolve*" political conflicts, depending upon post-election politics to discover the means of resolution. Thus, in two-stage decision-making, we are forced to choose between different inconveniencies: either we have reduce the number of parties represented in an assembly in an arbitrary way in order to manufacture a decisive majority, or then we have to leave the final choice of a president, cabinet or policy at the mercy of a possibly arbitrary process.

The interesting thing is that this trade-off—familiar to all students of politics—is actually a consequence of the impossibility theorems proved in the theory of social choice. According to this interpretation, the *real* problem revealed by the social choice approach is not that all democracies are threatened by constant instability—they are not. It is not that we are ultimately forced to choose dictatorship in order to avoid chaos, or *vice versa*. After all, the "chaotic" presidential elections in Finland (1931, 1937 and 1956) or in the USA (1824, 1870, 1888 and 2000) did not create any *political* chaos in the ordinary sense of the word (In some of the cases, their effect may have been quite the opposite!). The real problem is that we have to choose between radically different and less than perfect rules which necessarily violate Arrow's conditions in some possible situations. Some rules do it more often, some less often. The cycles found in the Finnish Electoral College, as well as the arbitrary composition of its US counterpart, are both extreme cases, the marks of the hiding-places of Scylla and Charybdis. The question of whether we should sail closer to Scylla or to Charybdis is a political question.

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Chapter 8
Some Conclusions

8.1 Problems and Paradoxes

What, then, are the implications of the theory of social choice for political philosophy of a more traditional type? We have reviewed numerous attempts to answer that question. Some of the alleged consequences are quite dramatic. However, in our analysis we have not found support to any one single grand thesis; we have not deciphered *the* meaning behind Arrow's Theorem and its logical relatives. Instead, we have found that in the context of modern representative democracy these basic results of the theory of social choice are connected to numerous context-specific problems and dilemmas. Some of them are old and well-known. Some are more recent. In this work some of them are mentioned only in passing while others are analysed more closely. Let us recall some of the problems and dilemmas discussed in this work.

General problems related to institutions of decision-making;

The impossibility of a qualitative ("non-mechanical") decision method Unanimity or consensus is not always attainable. Therefore, an additional principle is needed. Ideally, it would be a principle that simulated individual human reasoning by being regular and ordered while still allowing for qualitative considerations. However, all attempts to build the requirement of greater wisdom (*sanior pars*) or some other qualitative criterion into the decision principles leads either to the dominance of some party or to endless disputes of interpretation. In order to be regular, collective choices have to be based on mechanically applicable procedures. They have to be based on the countable support of options or candidates.

Sen's Paradox generalized The unanimity principle (or the Pareto principle) is incompatible with any non-preference-based decision principle, unless the two principles are lexicographically ordered. This is, *a fortiori*, true of any form of the majority principle.

The problem of permanent minorities One factor which may weaken the legitimacy of democracy is the existence of permanent minorities, that is, minorities which always remain on the losing side in issues they consider as important. Those in a permanent minority position have no rational reason to obey the majority rule. This problem has no institutional solution compatible with the principle of political equality. Such methods as fair distributions schemes, minority veto, minority quotas, or corporative representation and decision-making violate the equality requirement because they are non-neutral and/or non-anonymous. Proportional representation ensures political equality, but it cannot guarantee the equality of power, and consequently, the equality of outcomes. The only "solution" to the problem is a non-institutional one: In order to work democracies should be ruled by several, overlapping majorities, not by a single homogeneous majority. The very absence of a permanent majority will justify the use of majority rule. It seems that some amount of majority dissatisfaction is necessary in order to avoid the existence of permanently dissatisfied minorities.

The problem of intense minorities Both utilitarian considerations and considerations related to fairness seem to require that the intensity of preferences should at least sometimes be taken into account. However, any attempt to use intensity comparisons directly as the basis of decision-making would either make the decision rule extremely manipulable or remove decisions from the hands of citizens.

Problems related to the multiplicity of rules:

Aristotle's problem With more than two candidates or options, the meaning of "majority rule" becomes ambiguous. The world does not usually provide us with two options only, and there are numerous possible ways to deal with the more complex cases. None of the standard arguments for uniqueness of the majority principle in dichotomous cases can be generalized to more complex cases. A good argument can be made for the fairness of many methods (e.g. plurality, Condorcet, and Borda). They are fair or efficient in different ways.

Borda's Paradox The plurality rule is often considered as the most plausible extension of the simple majority rule. However, if there are more than two candidates and there is no majority winner among them, the plurality rule may select a candidate who is regarded as the worst one by more than a majority of the voters. All the desirable properties of the plurality rule in general elections are actually properties of a two-party system rather than of the rule itself. When more than two serious candidates become the norm plurality loses most of its appeal. Voters in a mass democracy have no way of reaching an agreement on reducing the number of candidates to two. Every voter is responsible for the way in which he or she casts the vote, and the majority of the voters may be held responsible for electing a bad candidate. But no one is responsible for the overall distribution of votes.

Condorcet's Paradox The Condorcet criterion (the pairwise majority criterion) is not decisive; this is the famous paradox of majority cycles. When majority

preferences are cyclical, the outcome is determined by something other than the preferences, often by the voting order and by voting strategies.

The agenda problem   The Condorcet Paradox is "solved" if (at least) one of the options involved in the cycle, or one or more of the pairwise majority comparisons, or one or more of the underlying preference orderings is omitted. However the exclusion of options, comparisons, or orderings would often determine the outcome. Who has the right to reformulate the agenda (or limit the domain)? If the agenda (or the domain) were restricted in a democratic way, it would lead to a regress, for the problem would reappear at the second level. In real life agendas *are* often contested. The answer to the question "What is the right agenda?" may be as controversial and subjective as answers to any questions on the agenda.

Weber's problem of direct democracy   If the popular choice is simplified by reducing the number of options, the power is delivered to those who do the reducing. If more options are allowed, the choice situations may become too difficult and the voting results controversial. If more complex voting procedures are employed, the intuitive simplicity and the related legitimacy of direct democracy is lost.

The meta-paradox of social choice   There are many conflicting and *prima facie* plausible criteria of fairness or rationality of a decision rule. Therefore, it is possible to make a case for (or against) almost any minimally reasonable method. By choosing some criteria the voting theorists have built theoretically articulated cases for (or against) the Condorcet-consistent rules, Borda count, approval voting, utilitarian rules, single transferable vote, plurality rule and so on. One "paradox" of social choice theory is that the very richness and complexity of the theory diminishes it usefulness as a practical tool in normative political theory. There are too many apparently reasonable criteria. If we use more than two criteria, our attempts to compare the performance of decision rules, to rank them, and to determine the best method may lead to an aggregation paradox similar to that of Condorcet's.

Locke's problem   Different rules produce different outcomes. When there are more than two candidates or options voted on, those who have the power to choose the voting rule may often produce their favourite outcome: the power to decide on how to decide often gives power over the issues. Nevertheless, we cannot do without such a power: electoral and other voting rules may also need to be changed time to time. Some apparently "small" changes in the electoral rules may change whole the balance of power. Either the rules of the electoral game are easy to change and, consequently, easy to manipulate for partisan purposes—or, then, they are difficult to change and their possible defects and injustices cannot be corrected.

Problems related to representation

Mill's problem   Modern representative democracies are two-stage systems. Consequently, the problem of representative democracy is double-counting: a majority of a majority is often a minority in the entire society. The double-counting problems

show that the two components of the modern democracy, representation and majority rule, do not always work in a harmonious way.

Fairness to candidates versus fairness to political groups In a democracy, people want to choose the most popular candidates and, at the same time, to ensure that the composition of assemblies and the resulting policies reflect their opinions. If voters vote only for candidates, the entire composition is likely to diverge from the popular opinion. If voters vote for political groups some less popular candidates are likely to get elected.

Decisiveness versus pluralism in representative democracy In a pluralistic society proportional representation guarantees that several political dimensions are involved in decision-making. In representative systems the decisiveness of elections and the accountability of decision-makers are essentially connected to the more basic responsiveness requirement. The single-member systems (e.g. the plurality and runoff systems) tend to produce stable parliamentary majorities and majority governments. However, in such systems election results are dependent on the overall distribution of votes, the voters have a temptation to vote in a strategic way, and the constituency structure has a strong effect on the results. By contrast, a very proportional system produces straight electoral results, but no majorities in legislatures. Such a system is likely to produce a multi-party system, which, in turn, may increase the number of cycles and incentives for strategic behaviour inside the representative assembly. Cabinet coalitions and legislative majorities are often formed only through complex and rather opaque negotiation processes. Arrow's result explains this dilemma. All minimally democratic two-stage systems of decision-making are non-dictatorial and respect the unanimity principle as well as the principle of universal domain at the electoral level. Hence, we are forced to choose between different mixtures of violations of independence and transitivity or path-independence; in practice, between arbitrariness at the electoral level and arbitrariness at the policy-making level.

Problems related to multiplicity of separate issues

Ostrogorski versus Anscombe There are two possible ways of adding complexity to the simple binary setting: we may increase the number of options, or consider the cases where several decisions on the acceptance or rejection of multiple interconnected alternatives are made simultaneously. Decision-making with multiple options leads to Aristotle's problem and to the standard social choice problems, while decision-making with multiple dichotomous issues leads to the dilemma of Ostrogorski and Anscombe paradoxes. In Ostrogorski's Paradox a party or a coalition may be supported by the majority and yet it may be in the minority on most issues. In Anscombe's Paradox, the majority of voters is on the losing side on most issues. The situation in the Anscombe paradox is exactly the same as in the Ostrogorski paradox, except that the issues in the Anscombe cases are voted on separately, while in the Ostrogorski cases they are combined. Representative democracy is vulnerable to the Ostrogorski paradox, while direct democracy is vulnerable to the Anscombe paradox. The problem is to choose between satisfying

the majority of the voters in every issue and satisfying the majority of preferences of the voters.

The problem of separate decisions   If there are more than two separately resolved issues, no anonymous voting rule is Pareto-ensuring. Moreover, if voters' preferences are non-separable and there is no Condorcet-winning combination, issue-by-issue voting may even produce a universally Pareto-dominated combination. In other words, all the voters would see all the available combinations better than the combination resulting from separate decisions.

Pettit's problem of coherent judgment aggregation   If we want coherent decisions, we have to accept certain forms of path-dependence, thus limiting the range of democratic responsiveness. Path-dependence is incompatible with the requirements all participants of deliberative processes should be to call into question any proposal or to introduce any proposal and that no premises of deliberation should be privileged or beyond revision.

Pettit's problem of collectivization of reason   A series of uncoordinated yes-no majority choices may lead to a combination of outcomes which is unwanted, impractical or even mutually inconsistent. Only relatively small, internally organized groups are able to possess a "will", that is, to commit themselves to collectivized reasoning. The judgment aggregation paradox shows that if the representatives are required to make consistent decisions, they cannot be controlled by their constituents on an issue-by-issue basis. If we are mainly worried about the traditional problem of preference cycles (and of the manufacturing of such cycles by strategic actors) we should, perhaps, be more favourable towards direct democratic mechanisms. If the inter-temporal coherence of judgments is our main worry, we should use indirect mechanisms which allow coordination and the "collectivization of reason" in internally disciplined representative bodies.

Heckscher's regress of reasons   In the theories of deliberation, the assumption is that the decision-makers (or a majority of them) should agree on a decision *and* on the reasons justifying the decision. However, these reasons may be backed by further reasons. If these further reasons are subjected to discussion and perhaps voted on, it is possible that the decision-makers will not agree on these further reasons. Their higher-order judgments may, again, be based on further reasons. If the decision-makers focus on the premises rather than the conclusion, what stops the regress? The regress of reasons has to be halted somewhere, but the way in which the regress is halted may well have an effect on the final result. Outside the timeless ideal speech model, some reasons are necessarily left unstated, and those in the majority may well disagree on these unstated premises, although they happen to agree on the propositions put on the agenda.

8.2 Finale

Since their birth, modern democracies have been troubled by numerous problems. Many of them are more difficult and more serious than those which appear in our list. What the problems listed above have in common is that they are politically and philosophically relevant, and that they are conceptually connected to, or can be understood better with the help of the theory of social choice.

The basic democratic values accepted as the starting-point of the analysis were political equality, responsiveness, and political liberty. The more specific virtues of democratic institutions can be derived from these values. For example, the democratic control of political agenda is related both to equality and to responsiveness. The requirement of decisiveness of decision-rules follows from responsiveness. The privileged status of the majority principle in democratic contexts is a further consequence of equality, responsiveness and decisiveness. And so on. However, no axiomatic theory of democratic values seems to be possible. The same value-considerations may point to different directions. For example, the two basic values, equality and responsiveness, may legitimately be used to support the use of direct democratic mechanisms *and* of representative institutions.

The Arrovian conditions of social choice may be (partly) justified by the democratic basic values. However, the conditions have not initially been developed as explications of the universal principles. There is a rough correspondence between some aspects of our moral criteria of evaluation and a bundle of formal notions. The plausibility of the Arrovian conditions varies from context to context. For example, in general elections and in parliamentary decision-making we certainly demand not only Arrow's non-dictatorship but something like political equality. In all decision-making contexts, the domain of choice is somehow constrained, but in democratic contexts the constraining mechanisms, while necessary, require specific justifications. The rationality condition seems to be a necessary requirement in courts and in evaluative contexts (e.g., ethical evaluation); in political decision-making it need not, however, be a categorical requirement. The independence condition (or at least some aspects of it) is *prima facie* justifiable—although not fully attainable—in voting contexts, while in many other contexts it is clearly unjustified. In some contexts of decision-making, strategic behaviour is excluded; in others, it is generally expected.

While there is no moral geometry, it may occasionally be useful to analyse some morally relevant issues also *in moro geometrico*. The democratic government, said Rousseau, is the most complex of all forms of government. The theory of social choice is potentially useful for a philosopher, for a constitutional lawyer, for an empirically oriented political scientist, and for an interested citizen because it may help them to see through the complexities of democracy. Sometimes it is able to show that the problems have no "solution", rather they should be seen as trade-offs between different values embodied in democratic institutions. Such "paradoxes" do not show that democracy is impossible; rather they are yet one more instance of a more general truth:

> The real world of values is inconsistent: that is to say, it is made up of antagonistic elements. To grant them full recognition simultaneously impossible, yet each demands total acceptance. This is not a matter of logical contradictions, because values are not theoretical theses. It is a contradiction which lies at the heart of human behavior. (Kolakowski, 1968, 216).

One aspect of political wisdom is the ability to recognize the value conflicts and to navigate through them. In navigation, maps are helpful. The clearer they are the better. But maps do not choose our destination; we choose it.

Reference

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