THE GAMIFICATION OF CITIZENS' PARTICIPATION IN POLICYMAKING

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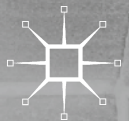
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PREFACE

Our interest in the topic of citizens' participation and gamification was aroused through long-standing work on participative budgeting (PB) in Germany following its introduction in the year 2000. Although initially unpopular, PBs have since become successful in at least some municipalities. The PB of the city of Potsdam has been the role model for successful PBs and this success relates to the use of gamification. Instead of following the classical Porto Alegre PB approach, the Potsdam PB strongly reminds us of the popular game show *American Idol* (see Chapter 5). Interestingly enough, the concept of the Potsdam PB was very similar to the Customer Connection program of the software company SAP, whose goal was to improve their products based on the needs of customers (see Chapter 2). There is a Hasso-Plattner Institute at the University of Potsdam and Mr. Plattner is one of the founders of SAP and still a consultant for the company. We tried to figure out if there is more than a just a spatial coincidence behind the similarity of the concepts of the Potsdam PB and the companies' Customer Connection program but we could not find any evidence of a link.

This book argues that gamification is indispensable for the successful participation of citizens (see Chapters 5 and 6). The structure of the book as well as its arguments is based on three supporting pillars:

- Basic theoretical literature of the concerned thematic fields: democracy (Schumpeter 1942), deliberation (Fishkin 1991, 1997; Habermas 1992) and citizens' participation (Arnstein 1969) (see Chapter 3).

- Storytelling: Examples of bad and best practices to illustrate how gamification as well as the participation of citizens can either work or fail (see Chapters 2, 3 and 5).
- Empirical (statistical) evidence: There has been a lot of research in Germany regarding citizens' participation in recent years, for instance, through democracy audits in municipalities. Some of this research was undertaken at the German Research Institute for Public Administration by the authors (see Chapter 4).

Gamification is one of the two main subjects of the book, hence its appearance in all chapters. Citizens' participation is the second major subject (featuring in particular in Chapter 3). According to citizens' participation, our reasoning goes somewhat like a visit to a doctor. First, we start with an examination of the patient to analyze what is wrong (see Chapter 3). Subsequently we make our diagnosis: What mostly ails the patient? Is it citizen non-participation and presumably the medication prescribed—deliberation—that is wrong (see Chapter 4)? Finally, and in accordance with our findings, we propose a medication very likely to help the patient (see Chapters 5 and 6).

The examples we use to tell the story and the data of the empirical surveys necessarily come mainly from Germany. We have been working in the field of research on citizens' participation for more than 20 years, with a strong focus on Germany. Moreover, our field of work not only supplies us with plenty of significant data but also gives us a clear knowledge of appropriate examples. What we are trying to show is as follows: By using German data and examples, we are operating on solid ground. The use of data and information from other countries always runs the risk of getting onto slippery ground: A few years ago, we analyzed all available data concerning the turnout rates of elections and referenda in Switzerland, at the federal level and for the canton of Zurich at canton and municipal level. We found that the turnout rates of elections and referenda dropped gradually to 50% on average. Since we discovered a similar decline to about 50% for elections and referenda in Germany as well, we dared to announce a general trend of a decline together with a 50% Principle. We proudly presented our findings at an international conference. That evening at dinner, Swiss colleagues asked us whether we knew that in the times before turnouts dropped to approximately 50%, particularly in the 1920s and 1930s with turnout rates of 80–90%,

there were severe fines for non-participation. In Switzerland, even schoolchildren know this, but our statistical sources gave us no indication. Unfortunately this shook up our sophisticated theoretical structure. Since that day, we have been very careful about using data and examples from other countries.

We hope that readers will find our ideas inspiring and have a lot of fun reading the book. Furthermore, we are very interested in receiving feedback concerning the book, especially if readers share the same experiences concerning citizens' participation as we had, or if readers report completely different experiences, for example, on the success of citizens' participation and whether there are approaches to the gamification of decision making and citizens' participation in other countries as well.

We thank you in advance for your feedback.

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Introduction

Abstract Using gamification in policymaking and involving citizens is nothing new. In ancient Rome, the audience in the Circus Maximus was involved in decision making by voting with either a thumbs-up or a thumbs-down gesture. Moreover, gamification is a basic principle of democracy. Direct democracy in classical Athens strongly resembled today's modern casting shows. The advantage and hence the attractiveness of gamification to citizens' participation is rooted in the equal voting weight of every citizen, the non-determinedness of results, clear and fair rules, and the openness/transparency of the decision-making process with a visible influence of the people on the outcome. Democracies that stick with these principles remain popular and stable because gamification ensures that the gap between the ruling elites and the people does not get too large.

Keywords Ancient Rome · Ancient Athens · Democracy
Volonté générale · Evolution theory · Olympic games

Games are older than humanity itself. One of the most famous quotes about gambling is from *The Bible* (Matthew 27, 35–37): "The soldiers nailed Jesus to a cross. Then the soldiers gambled with dice to decide who would get Jesus' clothes." Playing games is an inevitable part of human nature and was probably even more so the past. Chimpanzees are already very good at using joysticks to play "Pacman" or to catch

and trap a villain (Savage-Rumbaugh 1992, 141) and nearly all mammals play (Sharpe 2011). Moreover, playing and being involved in games seems to be very important for human evolution. The social psychologist G. H. Mead (1934) stated that "taking the role of the other" within the playing of games is necessary to develop a human self, as a dialogue of "Me, myself and I."

Games are more popular than anything else. With an average audience of 593 million people worldwide (Harris 2010) the Summer Olympics opening ceremony in 2008 might have had the largest TV audience ever. Sports events like the Olympic Games and the football World Cup are global events fascinating the masses in almost every country of the world. As the name suggests, the modern Olympic Games are a relaunch of an event from the ancient Hellenic world. The ancient Olympic Games were incredibly popular at that time and having started as a one-day event in 776 BC, they lasted nearly 12 centuries and covered a period of up to five days after numerous extensions (IOC 2017). What marked the Hellenic world of that time were the continuous conflicts between the myriad kingdoms and city-states. Apparently, the introduction of the tradition of the Truce (*Ekecheiria*) was a consequence of the importance of the Olympic Games. During the truce period everyone, especially the athletes, could travel in total safety to participate or attend the games. Messengers announced the Truce throughout Greece. Back then, as well as today, victory—especially for the multiple winners— entailed enormous prestige. Furthermore, the ancient Olympic Games had the special feature of democratic procedures. First, all free male citizens could participate, regardless of their country of origin or social status. Second, judges (*Hellanodikai*) (one or two at the beginning, 10 to 12 later on) were selected by all. The judges were supposed to be impartial, fair and incorruptible, although occasional rumors surfaced about individual corrupt judges. Thus, here we have two of the main principles of democracy: Equality (equal, free access) and justice (fairness of rules by impartial judges and procedures such as random selection). A third important criterion for the games and their democratic selection procedures is competition. The ancient Olympic Games comprised classic sports such as running, jumping, throwing the discus, and wrestling. Necessarily, two or more persons or groups have to compete to win. Similar but smaller sports events of merely regional or local significance existed all over Greece. This means that the ideas or the blueprint to gamify political procedures were already available in the Hellenic World

at that time, which is remarkable when looking at the proclaimed new approach of gamification within democratic decisions nowadays.

ATHENS: GAMIFICATION GAVE BIRTH TO DEMOCRACY

If we look at the development of democracy in Athens from the seventh to the fifth century BC, similar circumstances to today were at work roughly at the same time that the Olympic Games evolved. Impoverishment and a growing social inequality are the reasons for a widespread dissatisfaction with the political system among citizens and subsequently provide the basis for the growing demands for political reform. The kingdom of Athens—the city (*Polis*) and the surrounding territory of Attica—transformed into an aristocracy (oligarchy), then a tyranny, and then finally a democracy. The Greek term *demos* means "great number" or rather "majority." Thus, democracy means the rule of the majority, probably a political slogan against older concepts such as monarchy, aristocracy, oligarchy, theocracy, and tyranny. As a consequence, the questions came up of how could the takeover of power from elites to the people come into existence? Two principles played a major role:

1. **Participation: Openness & Competition (Freedom of Choice)**—Free Space for the People to Play
2. **Selection: Voting (Elections) & Lottery**—Decision Making by the Majority.

The development of democracy in Athens (Pabst 2003) meant a radical redistribution of power with decision making no longer reserved to a small group of elite people, and democracy being literally handed over to the people, although women, slaves, and foreigners were still excluded. Approximately 40,000 out of a total population of 250,000–300,000 people, or about 30%, made up the empowered group of citizens. As in other Hellenic communities, the backbone of the infantry were citizen-soldiers (*Hoplites*) attended by poor citizens or slaves who assisted them. Athens' military success was largely due to the development of a professional navy during the Persian Wars of 499 BC to 449 BC with rowers drawn from the lower classes of society. Several centuries later, the troops of the French Revolution under General Napoleon Bonaparte achieved military victories which seemed impossible, but were based

on the "levée en masse" with the citizen-soldiers gained. Therefore, it seemed to be a good idea to include all classes of society in political decision making. This implied a need for new decision-making mechanisms:

1. **Elections/Voting**: The most important institution was the assembly (*Ecclesia*). All citizens—the population as a whole—decided on all important issues, laws, contracts, very significant office bearers, and jurisdiction (verdicts). This often happened very simply in the form of a yes or no. For example, one person would plead for a new law/regulation, while another advocate would argue against this proposal. Finally, the assembly of the people voted either pro or contra the proposal. Maybe the most famous democratic procedure is ostracism (honorable exile). This game had some quite amusing rules: It started with the question "Do you want to punish/ban someone?" If the majority voted in favor of an ostracism, the next question would be "Who?" Everybody could scratch the name of a person to be banished onto a clay shard. The person with the most votes had to leave. There was no possibility of argument or vindication and no chance therefore to influence or manipulate results. On the other hand, the penalty—an exile of 10 years—was rather mild at the time and the property of the victim was left untouched. However, the assembly with its voting was apparently very popular. The openness of decisions, such as who would be banned, guaranteed a lot of suspension and excitement. Majority voting was the decisive mechanism to determine the winner from two competing sides. Modern direct democratic instruments, such as referenda, work in just the same way.

2. **Lottery/Random Selection**: Assignment by lot was the usual means for the selection of public officers, except, for example, chief military leaders (*Strategoi*). Every citizen willing to apply for an official position had the same chance to get the job regardless of birth, wealth, demagogic abilities and so on. Therefore, the probability of getting the job was identical for each applicant. For instance, a machine (*Kleroterion*) helped to select the members of the city council or Boule of the 500. Likewise, throwing dice, tossing a coin or a random roulette selection was the modus operandi of the *Kleroterion*. Exactly the same principle used in modern statistics to create representative samples.

Both major principles of democracy, majority voting and lottery, rely on equality and openness. They are two sides of the same coin. Every vote counts equally. No one has privileges to get an official position, and in Germany, or rather Prussia, the key characteristic of the biggest reform of public administration was the so-called Stein-/Hardenberg-Reforms; a reaction to the crushing defeats of the Napoleonic Wars. It is exactly in games like the rolling of dice or roulette, or in performances judged by referees where the result is not purely objective that chance plays a role, which is akin to throwing a match into a powder keg. Whenever there is any evidence that a result was influenced or determined in advance, the game no longer works. Another important finding is that even if we have a fundamental version of direct democracy in ancient Greece, there is still a division of labor between the players or actors who are applying for positions, making proposals and so on and the overwhelming majority of the citizen with just one vote. This is in sharp contrast to any kind of clear democratic system, whether it be representative or direct (Schumpeter 1942) or deliberative (Fishkin), such as citizens' juries. The crucial distinction is that the latter desire the audience to become actors. As a result, the mode of deliberative decision making (how much approval does a consensus need: 100%?), is rather unclear, unlike in majority voting (for instance the influence of the facilitators of deliberative procedures).

ROME: VIOLATING THE RULES IS BLOWING UP THE WHOLE ARENA

At first glance, the second very famous ancient city besides Athens, namely Rome, seems to have a completely different history. In the case of Rome, the city-state developed into an empire with a hegemony of roughly 500 years throughout the Mediterranean area and beyond. Furthermore, emperors governed the empire, which was anything but a democracy. However, looking at the republican era beginning roughly around 500 BC and ending in 27 BC we find striking similarities. Like Athens, Rome was a kingdom in the beginning before turning into an aristocracy, with the people gaining more and more influence as time passed. For instance, the citizens elected the twin heads of the government (two collegial consuls) and after a period of social unrest the position of a people's tribune was established and elected by the lower parts

of society, or Plebs, with an extensive veto right. Moreover, more and more plebeians were able to hold offices, even supreme ones, such as consul. Attentive readers of *Asterix* comics will remember the SPQR on the vexilloids of Roman legions. SPQR (*Senatus Populusque Romanus*) means "the Senate (the aristocracy) and the People (Plebs) of Rome." Similar to Athens, the Roman army was based on the militia system of hoplite armies, being citizen-soldiers, mostly peasants. However, the relationship between the aristocracy and the plebs was anything but harmonious. The period of the Roman Republic appears to be a time of continuous struggle for influence and power. In the late republic period around 100 BC, the twin structure of consuls on one side and tribunes on the other became more and more problematic finally resulting in civil wars. It was Gaius Julius Caesar who triggered the end of the republic by breaking all the rules. He usurped several supreme offices, such as dictatorship, censorship and tribune at the same time. He acquired permanent tribune powers although the bearer was meant to alternate after the legislative term. In summary, he abolished all the checks and balances of the Roman Republic. After the Caesar's assassination and a period of political and military conflict with Mark Antony, Cleopatra and Octavian as main actors, the latter established the empire adopting the title Augustus. However, games do not work if rules are broken. This applies to all kinds of manipulation, be they loaded dice, bribed referees or rigged elections with usurped power. To give an example from our times: In 2016, the constitutional tribunal of Austria declared the runoff presidential election void. It was a Solomonic judgment because it was a tight race with 31,000 votes between the Green Party on the left and the right wing populist FPÖ. A volatile political atmosphere existed. The constitutional tribunal determined irregularities during vote counting in 117 constituencies. Even the tribunal could not determine electoral fraud, so it ordered a repetition of the runoff election with the explanation: The aim of the judgment is to foster trust in the rule of law and democracy (Die Zeit 2016a, b).

Unlike Athens, Rome failed to become a democracy. On the other hand, emperorship had maybe been more appropriate for an empire at that time. However, there is another important political feature of the Roman Republic with enormous importance still today. Colonies as well as other states with contractual obligations could participate in political decision making. Even former enemies could acquire Roman citizenship and subsequent political rights. Moreover, the huge empire could not

work without the self-government of cities and states, providing compliance with Roman conditions. Thus, the empire might have killed the republic with its democratic mechanisms, but federalism and decentralization seem to be the prerequisites of larger political entities—at least for a city-state like Athens.

The Olympic Games were surely the biggest event in the Hellenic world. The Roman equivalent was the Circus Maximus providing space for up to 250,000 people, probably the largest event location of all time. The Olympic Games and the games conducted in the Circus Maximus have nothing in common except the chariot races. The Olympic Games were comprised of sporting events, not gladiators fighting for their lives, and it is worth mentioning that poor people had free access and were supplied with free bread. Then again, the gladiator fights showed a very special feature of early gamification. It is the well-known thumbs-up or thumbs down gesture. However, it is often misunderstood that thumbs down originally meant that the sword should not be used and the wounded gladiator should be saved due to his good performance, and the thumbs up gesture meant that the sword should be used to kill the opponent, and not the other way around as popularly thought. This is a very early example of an audience having the opportunity to influence the result of a game (Wordinfo 2017). As you can see, gamification can happen on two levels, first on the players' level (e.g., politicians or gladiators), and second on the audience level (e.g., spectators or voters who have a decisive role in determining the results of a game). Additionally, games need a third party in the form of referees or judges ensuring there is compliance with the rules. Law 5 "The Referee" within the Rules of the English Football Association (FA) starts with the sentence: "Each match is controlled by a referee who has full authority to enforce the laws of the game in connection with the match" (The FA 2018). In Germany, referees, mainly from football, are referred to as "the impartial"; and very often it is true.

"Survival of the Fittest" as Fitness for the Game

Einstein's famous quote, that "God does not play dice," was a reaction to the idea of the universe (physics) is ruled at least partly by chance, although his own work contributed to the dissemination of such ideas. A lot of research in quantum mechanics concerning the smallest known entities at the beginning of the twentieth century indicated that

sometimes "A" is the result of an experiment, and sometimes a different result "B" occurs (Hawking 1988). It is impossible to determine what happens at subatomic levels, for example, light sometimes behaves like a wave and sometimes like a particle. Thus, it is not possible to determine the behavior of a photon in general. It is only possible to figure out the probability of the different behaviors "A" and "B". Probability is a necessary feature of another scientific revolution in the nineteenth and twentieth centuries—the theory of evolution introduced by Charles Darwin (Mayr 2001). Very briefly, evolution appears to be a selection process. "Suggestions," such as genetic mutations or recombinations, result in new characteristics or behaviors in a random fashion. The fitness according to the conditions of the environment, such as predators, resources, nutrition, territory and nests etc., as well as the opportunity to mate, depends on the success of these "suggestions." According to biological science, 99% of species that have existed do not exist anymore. Even if we agree with Einstein that God does not play dice, and even if Darwin is right with his theory of evolution, God does use gamification.

From the perspective of evolution theory, gamification is a solution among others for the problem among others of decision making. Recently an international group of behavioral biologists had figured out that African wild dogs use votes to make the decision to go hunting (Walker et al. 2017). The likelihood of going hunting increases significantly the more individuals make audible rapid nasal exhalations (sneezes). The number of sneezes needed for decision making significantly decreases if dominant individuals initiate the hunt. Obviously, compared to the votes of ordinary people, the votes of alpha wild dogs have more weight. "As such, the 'will of the group' may override dominant preferences when the consensus of subordinates is sufficiently great" (Walker et al. 2017). Apparently, democratic elections are one solution to the problem of decision making, hierarchy is another. The radical approach to direct democracy in ancient Athens as well as the approach to representation in Rome failed after a certain period of time. Even in ancient Athens, it was difficult to organize all, or most, citizens to attend the town meetings. For instance, farmers were busy with their work and had large distances to travel, hence there were already attendance costs. During medieval times, no noteworthy efforts to obtain the participation of citizens existed. On the contrary, theoretically everyone could have participated, for example, in the election of the German King (Stolberg-Rilinger 2006) in the beginning of

the kingdom. In contrast to the city-state of Athens, the first German Empire, from roughly 800 AC to 1800 AC, was a rather huge area covering a large part of Europe and the transport industry was poorly developed, particularly in its early years. Thus, the number of people actually taking part in the election of the king decreased and attention was focused on those who could afford long trips, and this is more or less the same problem that direct and deliberative democracy attempts are facing today. In the end, only seven designated ecclesiastical and noble persons took over the election (the so-called *Kurfürsten*). What started as elections became more and more a process of negotiation between the most powerful lords and groups of the country than any kind of voting. Instead of clear rules, fraud and bribery were the main means of decision making, for instance, as in the election of Charles V (1500–1558) as German king. On the other hand, majority voting could not acquire legitimacy during medieval times due to the idea that decisions should be a manifestation of God's will. In the tradition of medieval religious thinking, J. J. Rousseau stated that the identity of the individual's will and the will of the community is only possible in very small communities (Schultze 2005). His ideas focused on the difference of the *volonté de tous*, meaning the will of the majority, and the *volonté générale*, which is something like the will of "a higher entity." Therefore, only consensual decisions could be legitimate because God only has one will. Hence, medieval thinking is very much in line with deliberative thinking today (Habermas 1992), even though the methods employed to come to a consensus might differ.

The re-origin of democracy in Europe was a rather long historical process. In England, it lasted from the days of Ivanhoe until 1832 with the introduction of universal suffrage. However, the Westminster system together with the US election system appear to be the oldest, the longest lasting, and thus the most successful democratic approaches in the Western world in terms of evolutionary theory. Critics of the system complain about the winner-takes-it-all principle, which might give one party "a lion's share of seats on a minority of the votes—regardless of how the majority voted" (Ghose 2017). On the other hand, clear rules that everyone can understand govern the system. Moreover, from the point of view of gamification, it offers a two-stage competition, first on the level at the electoral district and second at the national level, where the majority of the electoral districts won decides the winner. This method offers two exiting decisions or even gamification-like elements to

the citizen and voter: Will my preferred candidate win and subsequently will the preferred party win the race? In theory, the German election system appears to be fairer because the seats of the rival parties in parliament correspond to their share of votes. Critics of the system note that the citizens only have a minor influence on the people making up the parliament. The political parties decide who will be elected (e.g., von Arnim 1993) and in addition, no one knows which coalition will rule in the end. Opinion polls carried out immediately after the German election of 2017 showed that the vast majority of people (66%) were not satisfied with the result of the election (ZDF 2017a). The voters of the parties of the left or right wing, together with liberals, can be very satisfied with that result because no clear left- or right-wing coalition is possible. No party is willing to cooperate with the new allegedly right-wing populist AfD party (Alternative für Deutschland), which achieved 12.6% of the votes. The last German Parliamentary election took place on September 24, 2017. The formation of a new government is still ongoing now at the beginning of 2018. Due to the outcome of the election, only tragic choices for coalitions result. Any coalition made up of a crossover of the left and right is bound to dissatisfy both camps since neither side gets what it wants. The most important issue by far concerning voters was refugees/migration at 44%, followed by pensions: 24%, social equity: 16%, education/schools: 13%, crime/security: 9%, and employment at 8% (ZDF 2017b). Thus, every party is trying to push through their ideas concerning migration to Germany. Compromise seems virtually impossible.

From the start, the German electoral system has tried to be perfect: every vote should be represented equally and accurately in parliament (Möller 1985). In fact, no voting system delivers a perfect representation of the will of the electorate (Saari and Bauer 1988). If you see elections as a game, the German proportional representation system runs the risk of having ambiguous results. The Anglo-Saxon majority voting systems might be somewhat simpler but deliver clear results. People vote for a candidate and the party with the majority of successful candidates wins. This game, or election, has clear and simple rules and ends in unambiguous results. In Germany with its proportional representational system the result of the election does not determine the winner! The political parties and backroom politics, often called The Establishment, determine the government and the chancellor. In conclusion, proportional representation and majority voting systems have the potential to upset

the majority of people with unfair or unwanted results. Moreover, the situation in Germany in 2018 indicates that our system of proportional representation could block the formation of a government and its ability to make political decisions. Hence, electoral systems based on proportional representation appear to be a game with rules that are too complicated, and results of the games that are not necessarily understandable to the players, or voters. This resembles the *SpongeBob SquarePants* episode "Patrick! The Game," (Encyclopedia SpongeBobia 2018) where Patrick invented the rule: "If a player is in jail, he has to stay enjailed until he/she throws a six or someone says their name." The rule, however, makes no sense as a player may not throw the dice when in jail. The players' actions, or votes do not seem to be closely knit with political decision making. Hence, one could say German voters have to "stay in jail" until the next election.

The Fitness of Games: Workability

According to Clark (1940) "perfection is an irrelevant criterion" to explain competition because perfect competition needs a perfect market. The conditions of a perfect market, total information of all actors, with no reaction time between them, do not exist in reality. Clark concluded that workable competition instead of perfect competition must be pursued. Transferred to the problem of election systems, proportional representational systems try to be perfect but maybe therefore they often fail. In the case of Germany, this accounts for the events of 1933 in particular (Möller 1985). The rather simple majority voting systems of the UK and the United States, for example, appear to be more workable, as judged by the period of time they have existed without any revolutionary, fascistic, or other dictatorial interruptions. Majority voting seems to be more in line with the principles of gamification due to its clear and fair rules, and the openness/transparency of the decision-making process with a visible influence of the people on the decisions make. Hence, workability must be an important criterion for the further discussion of the successful participation of citizens in this book.

National elections are exciting and thrilling no matter which electoral system or system of government exists. In the run-up to the federal elections in Germany on September 24, 2017, about eight (!) opinion research institutes, mostly commissioned by TV channels, newspapers or journals, published new forecasts nearly daily, sometimes even two at

the same time (Merkur 2017). From the end of August until September 24, 2017, TV channels broadcasted special TV shows nearly every day, and sometimes more than once a day. More than 16 million viewers, or about 46% of all TV viewers at the time (Spiegel Online 2017) watched the TV debate between challenger Schultz (Social Democratic Party) and holder of office Merkel (Christian Democratic Party). The broadcasting was barely finished when a huge debate started—partially based upon opinion polls, partially on the assessment of experts—regarding who had won the TV duel. A funny aside: The Social Democratic Party announced the victory of their candidate Schultz in a classified google ad several hours before the debate had even started. (Piatov 2017). Obviously, this is a game-design like the ancient Roman Circus Maximus, and adapting it to our current time, we have gladiators (the two candidates) dueling with each other, and the audience decides who has won! The gamification elements can explain why this kind of political format is so successful and so popular. Presumably, the greatest, and also most complex and expensive, pre-election gamification event in the world is the US presidential nomination process. It entails a series of contests where candidates try to get their party's nomination. There are two different modes—caucuses and primaries—used to select the candidates (Masters and Ratnam 2016):

- Caucus: An informal/grassroots processes. Local meeting where party members discuss and express support for the various presidential candidates. The method is hard to understand and thus not very transparent nor is it governed by clear rules.
- Primaries: There are two general versions, open (to everyone) or closed (for party members only). Primaries use the normal majority voting principle usually processed by official bodies.

At present only 14 states hold caucuses. In general, the voter turnout at primaries is higher compared to that of the caucuses. Regarding the development of primaries, the first took place in Florida in 1901, and indicated a move towards a much greater influence of the people in contrast to party elites with respect to the nomination of presidential candidates (Smith 2011, 189f.). In the last US election, the Republican Party presidential primaries started with an unprecedented number of 17 major candidates. The selection process appeared to be a mixture of classical gladiatorial fights (12 debates were broadcasted nationwide

with a maximum of 24 million viewers) and the game of musical chairs. Opinion polls, the results of primaries, and subsequent dwindling financial resources resulted in the step-by-step withdrawal of candidates, leaving only Donald Trump. Having an "outsider" win, who was not part of the establishment of the Republican Party and who had smaller financial resources than the other candidates, indicates important aspects of gamification, such as non-determinedness of the result, a fair process with transparent rules, and a significant influence of the people/audience. The nomination process of the Democratic Party resembled the classic boxing matches of Muhammed Ali and Joe Frazier, an event already part of the classic Olympic Games. There were nine debates with a maximum of 15.8 million viewers. No matter whether you agreed with the results of the 2016 election or not, the nomination procedure for presidential candidates shows a process of democratization and gamification that has so far remained unparalleled.

To Sum up: A Frame of Reference for Gamification and Citizens' Participation

Gamification is not usually defined very precisely, but is rather an eclectic term: "The use of elements of games in other contexts" (see Chapter 3). The terms "game" and, in particular "playing," have many different meanings. For instance, a football match, making music, canasta, model construction and so forth, are all examples of playing. On the other hand, the meaning of citizens' participation is rather clear. It includes all opportunities for citizens to influence public decisions like the formation and decisions of governments (e.g., Kweit and Kweit 1981). In contrast, Cogan and Sharpe (1986) support a rather limited understanding of citizens' participation. They restrict citizens' participation to decisions beyond the democratic arena (e.g., planning). Even if planning only influences technocratic procedures of administrative bodies, such as the department for city planning, the participation of citizens always interferes with the competencies of elected bodies like city councils. Elected bodies must commission administrative decisions somehow. Therefore, citizens' participation has, more or less, an influence on the decision making of parliaments, councils and other elected bodies. Hence, it is useful to develop a frame of reference to combine the two facts of gamification and citizens' participation in order to clarify how it works.

Successful/workable gamification and citizens' participation inevitably needs to comply with the following four components:

1. **Results are not predetermined and cannot be modified afterwards**: The result of a democratic election must not be set in advance or try to be influenced by certain parties afterwards. The single list of People's Chamber elections of the former German Democratic Republic (GDR) for 1950 to 1989 always had the approval of more than 99% of the population, with a similarly high voter turnout. That is like playing roulette and always getting the same result, "0" for example. As a consequence, either the bank will go immediately bankrupt or betting on the figure "0" will be prohibited. This kind of roulette will not work. There will be either no supplier (casino) or no players (demand). Obviously, the socialist elections of the GDR violated this first principle of gamification in contrast to the procedures of classic Athens. This implies that the scope of possible decisions is well defined. Citizens' participation processes, delivering results that are impossible to implement, may violate superordinate laws or responsibilities and act like poison to citizens' acceptance. The violation of rules is even worse. When it comes to specific proposals or projects, it is important to clarify the financial, legal and political scope of possible decisions.

2. **Clear, fair, and simple rules, and transparency**: Games need clear, fair, and simple rules to be workable. In ancient Athens, majority voting was already very popular and seen as the means to create democracy. For everyone, the principle of one man (or woman), one vote is easy to understand. No game works when one of the players readjusts the rules during play. For example, during a football match the game would not work if one team decides that they are allowed to use their hands as well from that point on during the game. Unfair rules from the beginning are even more unlikely to make for a successful game. No one will accept a football match where the other team is allowed to use their hands, while their own team is not allowed to do so. Besides, the transparency of the decision-making process is a crucial factor too. Here again, no one will accept, for instance, a game of dice where one party is throwing the dice hidden from the other involved parties and just announces the results without the others being able to see. Fair and transparent rules are most important for the legitimacy of decision making.

3. **The Rematch**: On a given day, any team can win even against an all-powerful opponent (London 0 Hull 4, The Housemartins 1986). If results are not predetermined and the game is just and conducted by equal rules, everyone has the chance to win. There has to be a return match and a next season (election). Games or gamification need to have this choice: The next time! Losers might be winners next time. The National Socialist Party (NSDAP) stopped all kinds of gamification, aka elections, in Germany in 1933. After 1945, in the GDR the socialist rulers, along with their Soviet supremacy, did not allow free elections either. Games and democracy, and citizens' participation, do not work if there is no chance to win in the future. According to citizens' participation, the rematch might have two different meanings. First, free and fair elections must have, for example, a four- or five-year term with a new parliament after the election. A participatory budget should have a one- or two-year term so that unsuccessful proposals might win the next time. Second, if decisions to build a new a building or a new road are under contest, the next stage of the process—no matter whether bringing an action in law or a higher political force—might bring a return game at the next higher level.

4. **Attractive to all Target Audiences or Groups**: All the examples (historic or recent) covered so far—the democracy of Athens, the Roman gladiatorial fights and modern representative democracy, no matter what election system—have one characteristic in common: The distinction between the actors on the stage and the audience. The latter is a very important part of the game. Without an audience, games do not make sense. Moreover, spectator numbers are an indication of quality and success. The German writer and columnist Max Goldt said that actors are always in ample supply, and the audience is short most of the time. This applies in particular when it comes to citizens' participation. A lack of an audience will subsequently result in a lack of legitimacy. By the means of the thumbs-up or thumbs-down gesture, the audience of the Roman gladiatorial fights influenced the course of the game. Additionally, there is always a third group consisting of absentees who are not interested in the play or game. Any public game is only workable if there are enough skilled actors and—most important—enough of an audience.

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Gamification—Engaging People by Letting Them Have Fun

Abstract Gamification was named as one of the marketing trends for 2017 (von Schmelling 2016). But it is more than a buzzword, it is a concept inspired strongly by the video game and online game industries. In the private sector, it is very much in line with the democratization and humanization of work movements. Gamification may be used for customer/citizens and employee relations and product/service development as well as for the re-engineering of internal processes in organizations. An inevitable feature of gamification is fun because of its simple and/or understandable rules for beginners as well as for masters/professionals. Popular games have modes to determine achievements, winners, and ranks by measurable variables like goals, points, periods, and ranges etc. Intrinsic motivation (joy) is the key driver to play, although extrinsic motivation (applause and admiration) is equally important.

Keywords Game elements · Player types · Competition · Points Badges

Gamification in the Indication of Democratization and Humanization of the World of Employment

As with anything which is new and not widely explored, it is often referred to as a buzzword—the same applies to the term gamification (Shah 2012, 1). Consequently, it is not surprising that when talking

about gamification many different concepts and questions arise: Is it just about playing? Or is it just about earning points and badges for the sake of it? Is it maybe just about having fun and wasting time? The clear answer to the questions is that gamification in the business context, either in the public or private sector, can be so much more than just the playing a random game. Gamification is about engaging people and looking at what they are motivated and interested in, giving them playful experiences for the benefit of the players and for the benefit of others, such as companies, customers, co-workers, and citizens—depending on the scope in which gamification is used.

Gamification is nothing brand new in its sense. Even in the popular Disney movie *Mary Poppins* from 1964 there is a line in the song composed by the Sherman Brothers "A Spoonful of Sugar" referring to gamification in its original sense: "In every job that must be done, there is an element of fun. You find that fun, and snap, the job's a game" (Herger 2014, 33). This exactly describes the main purpose of gamification: the use of games to trigger people to do something they normally would not do or would have a hard time doing. In short, gamification makes work playful (Edelmann, 107; Herger 2014).

The term gamification is a combination of the words "game" and "infection," which implies that through a game something or somebody is infected (Hipp-Gruner 2017). A formal and widely used definition of the term comes from Deterding et al. (2011) who define gamification as "the use of game design elements in non-game contexts" (p. 1). There are other definitions in place, such as from Shah (2012) who defines the term as "… a way of using game mechanisms (e.g., competitive challenges, recognition and rewards) to improve a business process, with the goal of fulfilling business objectives" (p. 1). What all of the definitions have in common is the basic idea of making use of game thinking and game mechanisms to engage users in solving problems.

Hence, gamification stands in sharp contrast to older management concepts like the famous scientific management of F. W. Taylor (1911). Taylor asserted that simple and repetitive tasks together with monetary incentives motivate most people and thus are most productive. Therefore, a high degree of task sharing, supervision, and almost no scope of action are the most rational principles of organization (Gabler Wirtschaftslexikon 2018). It was the dominant management doctrine of the twentieth century and it is still very important in the twenty-first century. Obviously, gamification is a completely different approach to

human motivation and successful organizational principles. In the 1960s, the anti-Taylor movement gained control over the discussion of labor and management conditions. Based on the legendary Hawthorne-Studies (1924–32) of E. Mayo, the "human relations movement" demanded a democratization and humanization of working conditions. Mayo, for instance, figured out that extremely repetitive work might lead to mental abnormalities and less productive work due to a lack of motivating stimuli. Hence, gamification clearly belongs to the camp of democratization and humanization of employment conditions.

The twin brother of scientific management in the sphere of public administration is the concept of bureaucracy according to the German sociologist M. Weber (Swedberg and Agevall 2005, 18ff.). Some of the most important principles are:

(a) hierarchical organization with formal lines of authority, or chain of command,
(b) rigid division of labor,
(c) all decisions and powers specified and restricted by regulations.

At first sight, a rigid system hindering creativity and personal initiative is, on the other hand, a prerequisite to ensure the rule of law and prevent corruption. In conclusion, every approach free from strict rules and regulations must take into account that the scope of freedom should not violate important legal and moral principles. Thus, gamification does not seem to be appropriate in fields, such as policing and audit functions. Furthermore, there are still Tayloristic employment sectors today, for example, call centers, system catering and chain restaurants, where we do not expect to find gamification approaches. They are the new creative businesses and the IT industry where innovation, new ideas and problem solving are the foremost sectors in which a concept like gamification can flourish and is best suited.

With the rise of the total quality management (TQM) ideas, another important concept, namely customer orientation, became popular (Deming 1993). "Any customer can have a car painted any color that he wants so long as it is black." is a famous quote from Henry Ford highlighting the customer orientation of the Tayloristic world. Customer Relationship Management (CRM) therefore is an additional source to the concept of gamification (Klie 2014). The reform wave of New Public Management (NPM) introduced CRM—among other ideas—into public

administration (Pollitt and Bouckaert 1999). The seeds were sown for gamification in the public as well as in the private sector.

The Development of Games and Playing in General in Private Sector Companies: Basic Features of Games, Game Elements, and Player Types

It lies in the nature of the human being that people play as they always have. The German novelist F. Schiller (2004) said—translated freely— that only when at play do men become men. In everyday life, playing is an important part of our existence. People from all social classes and cultures love to play games (Stampfl 2012). This has not always been the case. While the Olympic Games allowed any citizen of all Greek communities to participate, taking part in the most popular event of the Middle Ages, the tournaments, or "knight games" was restricted to the nobility. The small class of the nobility, or knights, was exclusively entitled to take part as combatants (Medieval Chronicles 2018). However, games like football have always been a matter of the masses. In the course of the industrial revolution, football became an important entertainment factor, initially for the British working class (Football History Org. 2018). In his novel *The Gambler*, F. M. Dostoyevsky paints a marvelous picture of the life of the European upper class (and their servants) at glamorous places like Monte Carlo, spending their leisure time gambling in the casinos. The lower classes at that time did not have enough free time to play games because of the need to maintain a livelihood (Braudel 1979). Today, places like Las Vegas indicate that gambling in casinos is something for everyone.

People around the globe spend about three billion hours a week playing computer games (Reiter 2014). E-Sports—a contradictio in adiecto—are the latest hype. In some cases prize money of more than $18 million is issued and single competitors can win $1 million (Kicker 2018). Whether one takes care of the pigs at "Farmville" on Facebook or builds houses with "The Sims": In digital game worlds, as in the analogue game world, attention can be tied up for hours and beyond. The world of games is diverse and versatile, from sports, board-games, and skill games to gambling and modern computer gaming—it can be anything. Hence a universal definition of games can neither be determined nor can it be assigned to a specific discipline from a scientific point of view (Stampfl 2012).

In the words of Huizinga (2015), which is one of the most widely used definitions of games in literature: "Play is a voluntary act or occupation that, within certain established limits of time and space, is voluntarily accepted but unconditionally with binding rules, has its goal in itself, and is accompanied by a sense of tension and joy and a consciousness of otherness as the ordinary life." According to McGonigal (2012), games are based on four core elements: goals, rules, feedback system, and voluntarism. Compared to the Huizinga definition, the aspect of a feedback system is added. Rackwitz has identified five pillars of gamification (Rackwitz 2015; 2016, 70): goals, milestones and rules; information transparency; decision possibility; real-time feedback; and a challenge to solve a game.

The essence of a good game includes three components: an exciting challenge, relevance of the tasks to be completed, and the freedom to experiment within the game beyond the rules (Leitl 2011; re:publica 2011). The individual design of the game's building blocks steers the game or the task (Stampfl 2012). According to Werbach and Hunter, video games, online games and browser games usually comprise 15 elements: achievements, avatars, badges, boss fights, collections, combats, content unlocking, gifting, leaderboards, level, points, quests, social graphs, teams and virtual goods. Out of these 15 elements, there are three elements that are often referred to in literature and which form the backbone of gamification: points, badges and leaderboards, often referred to as PBL. By using the element of points within a game, it is possible to count efficiently. In this feature, points serve as a kind of feedback to users, in the sense of displaying an achievement and motivating the player. They show how users engage in accomplishing a task. They are also useful for setting goals or for determining which user has won in the event of a competition. Points can also indicate progress within games or are connected with rewards (Werbach and Hunter 2012). Badges are some sort of emblem in the form of achievements. Badges can be awarded for a variety of accomplishments, allowing them to be used flexibly (Werbach and Hunter 2012). A badge is awarded when certain goals are achieved. It can also demonstrate a higher status of the player (Paharia 2013). Leaderboards allow their users to compare themselves with others in rankings or in a list of the best players as well as to assess their own progress and skills. Leaderboards are generally open to the public within the community. Competition can motivate, but also demotivate by creating a feeling of pressure. There is a risk that

users will lose sight of the actual goals by focusing solely on their ranking position (Werbach and Hunter 2012). Leaderboards should therefore be used wisely.

The reflections of the video game and online game industries help us to delineate general issues for the success of games. Nearly all games have a way to measure success and/or winners or ranks. There may be points (e.g., goals in football), time measurement (sprints and all kinds of races) or distance/length/height measurements (e.g., long jump and high jump) or the use of judges (e.g., figure skating). Obviously the fairness of the determination of success and rank is easier to obtain through physical measurements and is less based on subjective judgements. Points and other measurements are also inevitable in tournaments and leagues. Successful games have clear and simple (basic) rules for beginners but deliver the opportunity to acquire outstanding skills and become famous at the same time. For instance, it is relatively easy to learn the moves of chess figures. Only very gifted people acquire the capacity to play chess to a high level. The same applies to most sports or games. In order not to discourage beginners or less talented people, successful games that are attractive to the masses must offer the opportunity to play at different levels. Most common are the distinctions between young—adult—senior and beginner—amateur—professional. Within these main levels, there are usually additional leagues. In Karate and martial arts, the color of the belt you are wearing is a sign of the stage of an individual's development, with the black belt being the highest level. A beginner should not start to practice with a black belt holder because it would probably lead to massive frustration and demotivation.

Take another example. Lucy, one of the main characters of the *Peanuts* cartoon by Charles M. Schulz, asks Schroeder while he is playing the piano, which he does all of the time with a statue of Beethoven standing on top of it: "What happens if you practice for twenty years, and then end up not being rich and famous?" Schroeder answers: "The joy is in the playing." Lucy thinks about his answer and replies: "You're kidding!" (Schulz 1973).

However individual the characters of humans may be, with regard to games and gamification there are two different sources of motivation: First, the "joy must be in the playing," but second, the applause of a vast audience in a stadium or concert hall is definitely not unwelcome.

To sum up a readers' digest of the voluminous literature dealing with the definition and the meaning of the term and concept of games and

gamification according to the needs of our inquiry, four inevitable bipolar principles arise:

1. Gamification is about fun, but is meant seriously and significant results are to be expected
2. Beginners and amateurs must have fun playing as well as masters and champions
3. The results are open, not predetermined and measurable, which does not mean that there are no clear targets and delineations
4. Intrinsic and extrinsic motivation are the key drivers

Last but not least, when talking about gamification, it is essential to take a quick look at the types of player. A common theory in this respect is the model of R. Bartle, which differentiates the types of players. Bartle explains that players can be divided into four types: killers, achievers, socializers and explorers. Each player usually takes several characteristics of different player types (Deißler 2013; Höfer 2012):

- The "killer" focuses on competition and victory
- The "achiever" focuses on collecting points and awards
- For the "socializer," sharing with others and social recognition in the community are most important
- Exploring an unknown world and gathering new impressions are the focus of the "explorer" player type.

Since people like to play, games offer a high potential to transfer their mechanisms to the world of work. Long-term business success generally means dynamically adapting to changing conditions, which is possible for human beings because the human brain is designed to do just that. Companies are examining how they can succeed in creating an internal dynamic in order to constantly adapt to market changes. In his free time, the human being voluntarily searches for such situations through games, sports and hobbies. Therefore, work and play can be combined with the approach of gamification (Rackwitz 2016). Allowing employees to work in a playful way and with playful approaches can increase motivation and help produce innovative ideas.

Creating a Playful Environment in Private Sector Companies

Gamification is highly inspired by the video game industry. Therefore, this huge industry serves as a thought leader when talking about gamification in the private sector, particularly in the software industry (Davis 2016). In the video game industry there is one rule among others for game developers at EA Games, the makers of the popular "Madden NFL" video game series (EA Sports 2018): Game software that does not arouse visible joy for its users within seven minutes is considered a failure and the game will be a flop. So the question a company should ask itself in order to successfully drive major business objectives by applying gamification is: What can we learn from the multi-billion dollar gaming industry?

Let's take an example from real life. The company SAP, a European multinational software corporation that makes enterprise software used to manage business operations and customer relations started to rethink its approach to software development a couple of years ago and looked closely at the video game industry for inspiration. In doing so, questions from employees came up like: Does this mean we can all look forward to using a "Killzone 3"-like interface to enter our travel expenses? The answer is "not exactly," but the general idea behind video game mechanisms and intrinsic motivation is very similar. Video games mean big business with the conclusion that enterprise software developers can certainly learn a lot from the emotional connection gamers make with the likes of the aforementioned "Killzone 3" from 2011. This game sold over 500,000 copies in its first week of release in North America, just like "Angry Birds," a top seller on the Apple iTunes app store. In this regard, R. Gorsht, Senior Director, Strategy, Global Pre-Sales at SAP stated: "Games contain certain mechanics that keep users (players) engaged and coming back for more. … People spend millions of hours playing Farmville. How do you apply those attributes back to enterprise software?" (SAP 2011). Even more, in his job Reuven Gorsht is charged with looking at the different ways that SAP customers really work and he was ultimately spending a lot of time looking at the topics of mobility, gamification and how these areas impact on the end user: "Mobile devices are much more user-oriented. … The ability to touch things and expect instant action means the paradigm is changing in a major way." (SAP 2011).

After looking at best practices in the video game industry, SAP started from scratch and consequently looked at simple connections, such as the behavior of children towards games. In this regard, Jim Hageman Snabe, former SAP Co-CEO, phrased it like this: "If I look at how my kids are consuming software, if it's not desirable immediately, they throw it away. Can you imagine what happens to your IT landscape when these people come into business? I don't know how you want to keep your IT strategy going so we'd better make our software delightful as well."

Other voices from the intuitive User Interface (UI) argue beginning with the definition from Wikipedia: "A UI is intuitive when users understand its behavior and effect without use of reason, experimentation, assistance, or special training." It concludes: "For such intuition to be possible, it requires prior knowledge, either from experience in the real world or with other software. So, for example, if something looks like a push button, we know from the real world that we can click on it to make something happen." Thus, the idea of the intuitive UI is rather the opposite of the idea of gamification, with only some aspects being compatible:

- A UI is intuitive when it has an appropriate combination of:
- Visual affordance: the UI has clues that indicate what it is going to do. Users do not have to experiment or deduce the interaction. The affordances are based on real-world experiences or standard UI conventions.
- Functional expectation: the UI delivers the expected, predictable results, with no surprises. Users do not have to experiment or deduce the effect. The expectations are based on labels, real-world experiences, or standard UI conventions.
- Efficiency: the UI enables users to perform an action with a minimum amount of effort. If the intention is clear, the UI delivers the expected results directly the first time, so that users do not have to repeat the action (maybe with variations) to get the desired result.
- Responsiveness: the UI provides clear and immediate feedback to indicate that the action is happening, and whether it was either successful or unsuccessful.
- Forgiveness: if users make a mistake, the either the right thing happens in spite of their mistake, or they can easily fix or undo the action.

- Exploring: users can navigate throughout the UI without fear of penalty, unintended consequences, or of getting lost.
- No frustration: emotionally, users are satisfied with the interaction.

The story above reminds us of the development of the graphical user interface (GUI) (Staff 2009). In the old days of personal computers (PCs) the operation of Unix/DOS-based operating systems afforded some kind of computer literacy. At least a basic knowledge of programming language was helpful to install and work with early IBM XT/AT computers. The invention of the GUI (Apple® Mac OS/MS® Windows) allowed people without any computer skills to be able to work with it. The visual presentation of the functions created a base that secretaries and other non-nerds, not having grown up with Ataris and Commodore C64s, were able to acquire PC-knowhow in a playful way using the principle of trial and error, and through sharing experiences with others and so on, in a rather short time. Thus, the evolution of the computer and especially the PC from the first C64s to the modern mobile devices of today, clearly indicates a movement to broaden and democratize the access to digital equipment. When the skills necessary to work with these devices become generally available for all to acquire, the benefit to society is evident; it provides a simple and playful way to explore the possibilities. On the other hand, for those literate with computer programming, even at a very basic level, the old Unix/DOS world offered many more options to play—even if the system crashed regularly and had to be recovered using defaults settings. But that was "the joy is in playing" (suspense). Today even computer illiterates can use mobile devices. This might hinder parts of society in pursuit of gaining more challenging competences than merely using a mobile phone.

Hence, there is another bipolar principle gamification should take into account:

5. Making things simple is vital for the success of a game, but oversimplification kills it (Tic-Tac-Toe).

The example above mainly explains how playful environments, conditions and opportunities should be provided in order to trigger creative and innovative solutions and products by offering the freedom to play. However, the allowance and promotion of creative and innovative behavior is not necessarily gamification. In the first place, it is about the

intuitive handling of hardware. Intuitive interfaces might allow simple interaction with a mobile phone or a tablet, and therefore might cause sales figures to increase. However, is that really sufficient to stimulate innovative ideas and problem solving?

The creation of playful conditions and environments permitting imaginative and innovative behavior is the first pillar of gamification. Playing games is actually the second pillar.

Playing Games with Customers in Private Sector Companies

To show a real-life case as an example of how a company has implemented gamification in connection with fulfilling the customer needs, let's talk about the Customer Connection program of the SAP SE (SAP 2018). Here the customers have a stronger voice in development than before as users know best what they actually need. So why not engage them through a program that benefits both sides? Nearly 400 product improvements have been prompted by customer requests and are currently being used by more than 6500 customers worldwide.

But let's start from the beginning, showing the customer perspective first. The following must have happened to just about everyone at some time or other: You're sitting in front of your computer using software for either private or business purposes and you wonder why that functionality you use regularly can only be reached with bizarre workarounds. Why is some button or other hidden where you least expect to find it? Or you'd like to see more features in one context so that complexity could be reduced in another. "What was the software developer thinking about?" you often ask yourself, forgetting that different users have their own focuses when working with software.

This is where the Customer Connection program can be seen as an example of the principle of developing a product according to the customer needs. Hearing from as many users and companies as possible where there is room for improvement, customers are forced to give direct feedback to the development department, known within the company and to its customers as the Customer Connection program.

"Thanks to the Customer Connection program, our customers can directly influence which continuous improvements we implement in products within our development portfolio. Their specific requests

are based on their experiences with SAP products and the identified potential for optimization. This potential is jointly evaluated with the respective product areas. When it comes to execution, SAP developers work hand in hand with the users on the customer side. As a result, we often see significant simplifications of daily operations for our customers, which we believe add value to SAP maintenance," explains Tanja Rückert, head of the former Quality Governance and Production department at SAP. Numerous successful projects show that this approach really works.

But how does the company arouse interest in its customers to actually take part in the program and suggest their ideas etc.? This is reached by using gamification elements. Customers who want to suggest an improvement do so by using a Customer Influence Platform. There, they find a folder of predefined key topics, which have been identified in cooperation with user groups continuously working on this project. The scope and duration of each individual focus topic is described for the customer at the beginning of the project, and the assignment of development capacity by the company has also been defined. It is an easy and very transparent process. Milestones—with which customers are involved as the project progresses—are part of the standard process that each project follows.

Customers post their ideas about the individual focus topics on the Customer Influence Platform. These ideas are then assessed and discussed by the other users and are voted on. The "players" act in different roles: (1) "request owners" submit and describe their idea. (2) "Subscribers", who "vote" for the idea and thus prioritize it to qualify for backlog analysis by the company (a minimum of five subscriptions per request); and (3) "Followers" get informed about the progress of the "idea" and make comments on it. If at least five customers think an idea makes sense and they think a solution should be implemented and provided by the company, the idea is passed on to the software development people in order to be evaluated. Once the assessment phase is over, customers receive feedback about whether—and how—the idea will be implemented or they are given a reason for the idea not being pursued. The customer suggestions implemented as part of the Customer Connection Program are developed within approximately six months on average and, after validation by the customers involved, are shipped as an "improvement note" by the company and as part of a support package. This means customers can consume these improvements

immediately and they are free of charge. For transparency reasons you go to the "improvement finder," which enables each customer to find all the improvements delivered through the Customer Connection program using a simple Google-like search function.

As you can see, the program uses key elements of gamification to make their customers have fun while working together to find solutions: feedback, milestones, simple, transparent, voting etc. Customers can therefore use this platform specifically to:

- Submit improvement requests
- Discuss and subscribe to submitted improvement requests
- Track the status of the improvement of relevant requests
- State which improvements they want to see implemented.

"The Customer Connection Program has helped SAP to prioritize product development and gives us users more transparency about the current status. That's a big step forward," says Craig Dale, chief executive of the UK and Ireland's SAP user group, who recommends that members actively participate in the program. "This is the most direct way to make suggestions. And because the portfolio of the company is constantly being further developed, it is important for users to have a say," he adds. And the fact that this codetermination leads to greater user satisfaction pleases not only the customers and the user groups, but also enhances company sales. "From our regular customer surveys, we know that customers who get involved in Customer Connection are even more satisfied than those who are not yet familiar with the program," says Yasmin Awad, responsible for relations with SAP user groups globally. "For us, it is very important that we get such feedback—because it's the only way we can make our software even better."

Playing Games Within the Organization

Next to the Customer Connection program, the company also uses gamification within the company to improve work processes. One useful method is to use its own solutions creating experimental applications designed to enhance everyday functions. A good example is the "Lead-in-One" application. Since most sales managers dread the somewhat cumbersome task of assigning incoming sales leads to their account executives, SAP put a golf-themed iPad application on top of the process.

Golf balls are seen as leads, and holes represent the sales representatives. So, if the sales manager drives the balls into the holes, he or she is actually performing a business task in a playful manner on a game-like interface instead of going through the usual painful process.

A further example for internal use of gamification is the gLearning environment at SAP. The gLearning environment is a new approach to blended learning courses that tries to incorporate game mechanisms to make a very boring activity—watching 50 or 60 hours of learning videos, which often happens during the regular massive online tutorials—more fun and more engaging. How does the solution work? It gets rid of the boundaries of sitting alone in front of the computer and watching videos by allowing the user to see all the other participants scattered around the world. The user has the possibility of seeing which lectures other colleagues are currently working on, and he/she can interact with them and find leaderboards or progress mechanics of the overall learning skill. In sum, the user can force competition and challenge with points, badges and leaderboards, and watch live progression with lines and bubbles and bars and indicators. Around 80% of the learners in gLearning finish completely, compared with other e-learning rates where only 20% stick to it till the end.

Of course, SAP is not the only company highly engaged in gamification, further examples of gamification in the private sector can be found at TSG Hoffenheim, a German football club that uses productive exercise apps to improve players' physical fitness or their mental reaction times.

Another example is a so-called sustainability-themed app, which allows employees to collect and report on their own contributions like carpools and recycling. Based on an incentive framework, employees can share ideas (e.g., new bus routes) and earn points for each idea they nominate. A dashboard ranks each office or team, keeping users in a competitive spirit and making them eager to participate. Users can potentially cash in points to crowd fund solar panels or more electric cars.

Or let's just take professional networks, such as LinkedIn and XING. Professional networks encourage people to share more information than they otherwise would by using little progress bars showing how well the member is doing and how many people have looked at their profile etc.

However, at the end of the day, gamification is not always is about fun, shooting things, or collecting points. A study from Gardener shows this: Of all game players, only 1% represents the "killer" player type,

about 10% are seen as the "achiever" type, and another 10% as the "explorer" type. The huge majority of users confirm to the "socializer" type. It is about providing balance. The right information is exposed at the right time to keep users engaged and not overwhelmed. Likewise, users should gradually become comfortable with functionality as opposed to being exposed to all of it at once, which often leads to confusion and frustration. It is absolutely critical for businesses nowadays to continue adopting gamification principles in order to reach their business objectives.

In general, gamification is still a rather new concept in the private sector and its impact on the future of the technology industry should not be understated. Enterprise gamification is still in its infancy and there is much more to do and learn. The private sector is already using gamification more extensively for its business purposes, whereas the public sector seems only to be at the beginning of exploiting gamification for its purposes and needs. It is evident that the public sector seems to have a highly critical attitude towards gamification because it is new and people are afraid of something new, as they do not know in where it is leading to, nor how to use it properly or what opportunities there are. Let's take a simple example from the past. When the telegraph line connected Texas and New York for the first time, the New Yorkers thought only a telegraph in one direction would be needed. What could the Texans possibly have to say that would be interesting to people in New York? So at that moment and at that point they did not see the value in the telegraph line. This can be observed with integrating gamification in the public sector as well.

However, there are also some good examples and initial approaches in the public sector to using gamification in order to generate citizens' participation. One is the case of the municipality of Ludwigshafen in Germany with their project on the renovation of the elevated northern highway, which will be highlighted in more detail in Chapter 5. However, the example of the elevated northern highway in Ludwigshafen points out that in the case of potentially conflicting goals, the involvement of an only small group of citizens, even at an early stage, is insufficient. Moreover, it is important to ensure a broad involvement of a rather large number of relevant citizens achieved through a gamification approach as in the case of Ludwigshafen. This case indicates that a simple participation method and procedure with ludic elements and a clear outcome are very helpful in reaching the overall goal. Additionally,
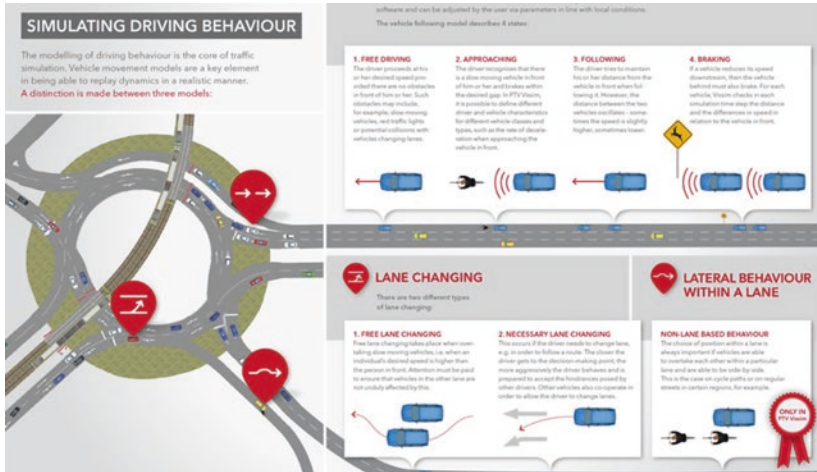
Fig. 2.1 Example of planning software used to simulate traffic by PTV vissim

visualization, such as 3D animation, can help to translate complicated planning measures for laypeople.

All kinds of planning software for experts are available today. Regardless of whether one wants to plan a new house or garden, with the help of 3D simulation anything can be depicted and can be set out in a gamification-type scenario. Figure 2.1 shows such an example of planning software.

With the help of an appropriate piece of software it might be possible to integrate citizens into the planning of large-scale projects using multiplayer online games. The task of planning will be to figure out the right setting of the game, for example, defining possible courses of a road, locations for a plant, and minimum or expected capacity etc.

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Citizens' Participation—Theory and Practice: Confronting the Theory with Some Stories About Citizens' Participation

Abstract Democracy is in fact not a government of, by, and for the people, it is rather a government of, for, and controlled by the people. Practice shows that citizens' participation in Germany is far away from the theory and its high expectations, particularly concerning deliberation. We deliver some striking but nevertheless typical examples and explain the problems through the telling of those stories. Citizens' participation often appears to be just tokenism. In contrast to any workable game, the results of citizens' participation often appear to be predetermined or insubstantial, like having to choose the jewels to go with your nightwear. Moreover, the theory is proposing that people want to be permanently politically active and to be personally present, surveys show that the opposite is the case.

Keywords Direct democracy vs. Representative democracy
Majority decision · Deliberation · Citizens' participation as tokenism
Arnstein's ladder

"While there appears to be universal agreement that the involvement of citizens in the decision-making process of government is a good idea, there is little agreement as to the best way to achieve meaningful involvement. There are many ways to consult with the public and get a sense of what they see as problems and opportunities; it is quite another thing to actively engage citizens in the decision-making process" (Callahan

2007). As mentioned in the preceding quote, the literature offers a plentitude of different approaches and concepts to citizens' participation. These range from the abolition of representative democracy (a total regime change) through milder reforms, such as modifications and additions of direct democratic elements, to rather minor modifications like more citizen engagement. The main issues of theoretical considerations are:

1. Redistribution of power: "It is the redistribution of power that enables the 'have-not' citizens, presently excluded from the political and economic processes, to be deliberately included in the future" (Arnstein 1969, 216–224).
2. Deliberation: Majority rule vs. consensus. Alternative visions for the future of democracy (Della Porta 2013).
3. Technocratic approaches: Involving citizens in the decision-making process of planning procedures, such as health, education, transportation, and environmental planning affairs mostly carried out by bureaucratic agencies (DeSario and Langton 1987).
4. Add-On to the representative democratic system: Since elections are only carried out every four or five years they do not contain much information about the opinion of the voters with respect to specific measures and concrete actions. Elections rather reflect the general political views of the population (Klages and Vetter 2013).

REDISTRIBUTION OF POWER, DELIBERATION, AND WORKABILITY

In the political context, the term "participation" includes more or less every means to influence political decisions by citizens (Van Deth 2009; Schumpeter 1942). Any kind of readjustment of responsibilities in a political system, such as decentralization by the transmission of powers to local authorities or greater possibilities for direct democratic decision making are redistributions of power. This does not necessarily mean more democracy. For instance, in a highly federal, decentralized country like Switzerland with a maximum of citizen lawmaking and direct democracy (Kaufmann et al. 2005) at all political levels (federal, state and community) any kind of redistribution of power necessarily turns out to be anti-democratic. Everyone already has the same equal opportunity to participate. However, the handing over of power to the "have-nots" must withdraw rights from other citizens who form the

majority. At the community level, for instance, the community budget is very often subject to citizen lawmaking and four-fifths of the Swiss communes reach their decisions in a direct democratic forum or a communal assembly (Schweizerische Eidgenossenschaft 2017). Therefore, there is no reported case of a citizens' budget (PB) in Switzerland[1] like the one in Porto Alegre, Brazil. The world-famous citizens' budgeting in Porto Alegre remains one of the leading redistribution participation approaches. The PB of Porto Alegre is mainly about projects and priorities. In sum, the major reported achievements are: "women and ethnic minorities participated to a comparatively large extent. There were also redistributive effects—poor districts achieved a higher level of public investment per head" (Participation & Sustainable Development in Europe 2017). On the other hand, the reported achievements might be only believed or desired achievements. According to empirical facts, the achievements of PB in Porto Alegre largely appear to be a myth (Mororó 2014).

The quarrel about the conversion of the railway station in Stuttgart (the acronym of the project is S21), the capitol of the state of Baden-Württemberg, represented a kind of watershed moment in the discussion about citizens' participation in Germany. As a consequence of the discussions, federal and national environmental and planning law was amended. From that point on, public as well as private project developers in Baden-Württemberg are obliged by law to consult and enlist the public at the earliest possible stage of a project if the project might imply significant negative impacts to people or the environment (Masser and Hamann 2017). "S21 [is] the complete restructuring of the Stuttgart rail node. … It is the largest upgrading concept for public rail transport in Baden-Württemberg since the 19th century" (Bahnprojekt Stuttgart-Ulm 2017). And it became one of the most controversial political issues in Germany in the last 10 years. The project was planned in a 15-year ongoing process with the involvement and decisions of all responsible democratic bodies, such as administrations, municipal councils and parliaments. The public had several opportunities to take part and to oppose the project. Nothing happened until the project became a reality. An unprecedented emotionalizing of the discussion took place. The result was numerous police actions using water cannons, with a number

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[1]We did several Google searches and asked Swiss Colleagues.

of people injured. After a failed mediation broadcast on state-owned TV and streamed on the web, a subsequent referendum at state level was the last chance to get out of a tight spot. According to O. W. Gabriel, a political scientist who did a lot of empirical research regarding S21, it was the attempt of a minority, namely the opponents of S21—the Green Party—to overturn legal decisions. Several attempts, such as round table discussions and mediation to ease the discussions and to find a consensus failed. A final arbitration could not bring the opposing parties together, although the arbitration was a big media event: the nationwide public-law broadcaster Phoenix attained its second-highest viewer rating in history (Stuttgarter Nachrichten 2010). The renovation of a provincial train station had become a national affair. The only possibility to solve this Gordian knot was a referendum. The results of the referendum delivered interesting insights: Contrary to the media coverage before the referendum, the proponents of the project won with the votes of 60% of the electorate who voted (Landeszentrale für politische Bildung 2011). Most important are the regional differences: In general, the more affected the area, the higher the turnout rate and support for the project (e.g. in Stuttgart and neighboring regions). And vice versa in Freiburg, a university city politically dominated by the Green Party but far away and without any connection to the railway project, where the opponents dominated, but the turnout rate was poor; surprisingly the turnout-rate of the referendum, highly promoted by the press and media, at 48% fell far short of the number in ordinary elections compared to the State elections of 2011 at 66%. However, the referendum was a clear-cut solution to the problem. Above all, the result was unambiguous, the affected regions and the majority of the country voted for the project and only very few unaffected cities, like Freiburg, voted against it. Nevertheless, according to opinion polls after the referendum, a considerable number of opponents still do not accept the decision, with about 12% of the electorate of Baden-Württemberg and 27% of the opponents holding that position (Gabriel and Faden-Kuhne 2012). However, would this 12% of the project's opponents accept any kind of deliberative solution not totally in accordance with their convictions? The referendum seems to be the only way to solve the problem and enable life to go on.

The appeasement by the referendum can be explained. Over the past few years—as in other countries—democracy audits were conducted at the municipal level (Roth 2010). The German Research Institute for Public Administration carried out two of these audits, one in the small
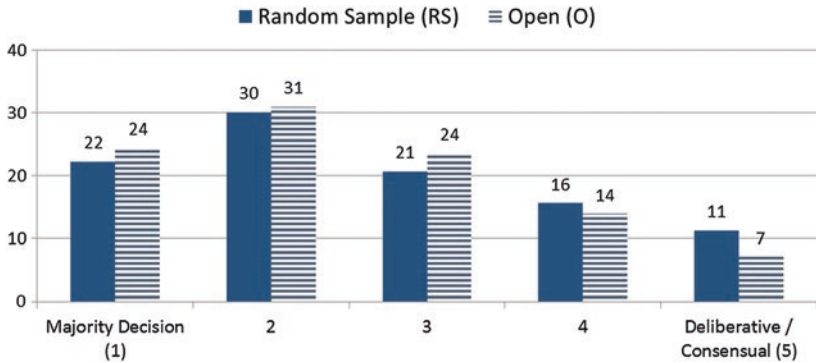
Fig. 3.1 Majority or consensual decisions? Democracy audit of Gießen 2014 (Boje and Masser 2014) (valid) percentages

town of Viernheim near Heidelberg, and a second one in Gießen, a university city near Frankfurt with about 80,000 inhabitants, of which 24,000 are students. The democracy audit for Gießen was carried out in 2014. One of the remarkable results of the survey was the outcome of the question of majority versus consensus decisions. It was asked whether public decisions in a democracy should be based on the will of the majority voting or by means of discussions with consent (deliberation). The surveys were twofold: First there was a closed random sample to ensure representative results and second there was open access to the survey through the Internet in order to give everyone the opportunity to take part. The two groups of the politically active people and the non-politically active—later defined as "selective utilitarian"—differ significantly from almost all political orientations, but not, however, regarding the particular case of majority versus consensus-based (deliberative) decisions (Fig. 3.1).

Clearly, the majority of people favored majority decision making (more than 50% in both groups). On the other hand, there is a large indecisive group of 21–24% in the middle and about 25% with a tendency (4) or a manifest opinion (5) to consensual decisions. A workable democratic system has to respect both positions—according to their significance (majority more than 50%, deliberation about 25%).

According to Schumpeter (1942) there are two decisive factors of redistribution of power by citizens' participation. Firstly, who is to

be declared as "the people" and thus entitled to be involved in public decision making, and secondly, how are decisions made? As the example of S21 shows it is very important to discern between people directly affected by particular infrastructure projects like new or extended roads, foremost by the exposure to noise, and the broader audience which benefits from the project most of the time (e.g. by reducing the time of work journeys) or those citizens speaking for or against the project for political, moral, or ethical reasons, such as "a new road is promoting traffic and thus is killing the planet through global warming."

ARNSTEIN'S LADDER OF CITIZENS' PARTICIPATION—REMASTERED (GERMAN VERSION 2018)

The levels of citizens' participation according to Arnstein (1969) deliver an ascending order from information, to consultation, and finally, active involvement. "Arnstein's Ladder" is a useful instrument with which to classify and judge our following not-so-best-practice examples, for instance, manipulation and therapy (non-participation) appear next to tokenism; Not helpful for the acceptance of citizen's participation. Staying with the metaphor of the ladder, what our examples tell us is that the ladder rungs are in different conditions. Some are already broken or missing, while some are rotten and about to break at any time (Fig. 3.2).
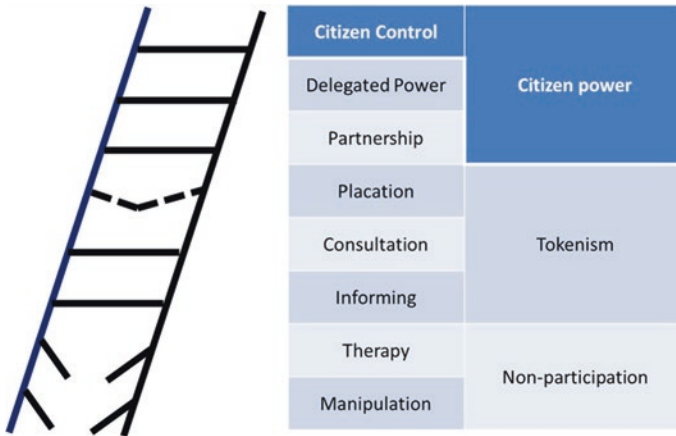

Fig. 3.2 Arnstein's ladder—remastered (German version 2018)

The ladder tells us that using participation procedures only for manipulation and therapy purposes is counterproductive. It will do more harm than good to a project and lead to disenchantment with politics in general. Informing and consulting people are necessary steps to involve them. To stop climbing the ladder after consultation and to try and appease or placate people is very dangerous because this ladder rung is rotten and you are bound to drop from quite a height. Citizens become alarmed and start to organize resistance groups and actions. The following examples tell stories about falling off the ladder or not even reaching the stage of information. Gamification with its inevitable criterion of openness of results must at least reach the partnership rung of the ladder.

The Story of "The Blue Lagoon" and the Problem of Tokenism

A good example to explain the difference between the interests of affected residents and the broader audience as well as city planners and politicians, is the petrol station at the east alley in Trier, the supposed oldest German city in the broader triangle of Germany, France, Luxemburg (and nearby Belgium) with about 100,000 inhabitants, many of whom are students at the university. A few years ago, the city planning department developed the idea of an uninterrupted circular bicycle and pedestrian track around the inner city. The petrol station, known by the local population as "The Blue Lagoon" because of its blue light—the trademark of the petrol company—at the east alley impeded the project. A citizens' panel comprising a small group of about 20 people as an instrument of citizens' participation came to the conclusion that the petrol station should be removed in favor of an uninterrupted circular bicycle and pedestrian track. The city planning department very much appreciated the result of the citizens' panel. Everything proceeded in the usual way until a group of local residents started an initiative to support the survival of the petrol station. The arguments used for the preservation of the petrol station did not seem very sophisticated: People stated that they needed the petrol station as it was their only opportunity to shop when the regular shops were closed. Other opportunities to shop were too far away. The supporters of the station's preservation started a campaign in the course of the participatory budgeting (PB) of 2012, but this did not make it into the top ten of approved proposals even though it was the most discussed issue (Uni Trier 2018). On the contrary,

a majority had voted against it ("thumbs-up/thumbs-down"). As a result, the group advocating for the petrol station migrated to the social media channel of Facebook and continued their campaign with an enormous number of "clicks" and "likes." Subsequently a lot of the members of the city council overturned their decision to remove the petrol station. A member of the city council expressed his decision, roughly as follows: "Thousands of clicks on Facebook are much more important to me than a pair of dolts in a citizens' panel" (Pistorius 2011). This behavior might be judged as morally objectionable, but it is rational. The affected citizens' community seems to be very concerned about the issue. Thus, their decision in the forthcoming election is influenced to a very high degree. Other people, just thinking it would be nice to have an uninterrupted circular track might not predicate their choice in the next election on the petrol station question. Hence, we should take into account that citizens' participation necessarily interferes, more or less, with representative as well as direct democratic decision making.

The Trier example gives some clear insights into how not to practice citizens' participation. Honestly speaking, it might have been hard to foresee that the taking away of the petrol station and the subsequent the loss of shopping opportunities for local residents would lead to an ongoing political dispute in the community. Obviously, it appears that the residents had no representation on the original citizens' panel, which basically executed the will of the city planning department. A small group of non-experts on a citizen jury is easy to manipulate because a small number of people inevitably relies on the input from external experts with regard to their judgment on an issue they are not familiar with. Hence, both the choosing of experts and the composition of the participants determine the result. There are numerous other examples of participation attempts working with small or specifically selected groups and the result interfering with the interests of other groups, especially people living in the neighborhood. Frequently, parking space is a point of contention. It is normal for people to want to park their cars near to their homes. A good example of including the wrong people was the involvement of kindergarten children in the redesign of a public marketplace in a borough of 25,000 inhabitants. The children of course only took their personal interests into account and developed a beautiful playground. Unfortunately, the market place also needed to house the weekly market and other events as well. Additionally, the residents wanted to park their cars there.

Second, the attempt of local people to assert their rights with the help of the PB of the city a few years later was also unsuccessful. The majority of the participants of the PB did not think the petrol station was needed. However, these or at least most of these people presumably did not live near the petrol station. The idea of an uninterrupted circular cycle track around the inner city might well sound plausible to them. The fact that the east alley must remain a not very romantic inner city highway with two profiles in both directions and a huge intersection nearby might not have been apparent to most participants of the PB. The PB of Trier reveals the problem (Masser et al. 2013) of being unrepresentative. It is purely online-based and has no mechanisms, such as a representative citizens' survey to influence the results. Moreover, the example of "The Blue Lagoon" shows that everyone can decide about everything, whether they are the people being affected or not. The subsequent referendum showed that this is a huge problem.

Because of their failure regarding the PB, the local people migrated to Facebook and 4500 users voted for the maintenance of the station. The political arena was shaken. The city council was unsure of their decision. The head of the building department, a Mr. Ludwig, recommended the city council should remove the petrol station (Wolff 2017a). Mr. Ludwig, as a German municipal civil servant, is not risking his job and he does not have to worry about elections. Ultimately, a referendum forced by the local people was unavoidable. The referendum was held on December 10, 2017. The result was more than clear, even the necessary quorum of 15% of the electorate voting for one of the two options was barely reached. The total turnout rate was 23%. Hence, the approval for the maintenance of the petrol station was overwhelming. The percentage of votes in favor of "The Blue Lagoon" was above 70% in all boroughs of the town. In the neighborhood of the petrol station itself the turnout rate, as well as the approval vote, was rather high.

The head of the building department, Mr. Ludwig, commented on the result: "Majority is not truth—these are two completely different things" (Wolff 2017b). The result of the referendum needs to be explained as well as the completely different results of the citizens' jury and the previous PB approaches. As already mentioned, small group approaches, such as citizens' panels or juries offer the opportunity to manipulate them in a certain direction and to reflect the will of the administration, or single persons or departments. Thus, "The Blue Lagoon" might be an example for many who criticize citizens'

participation measures in Germany. Citizens' participation, according to its critics, only has the function of tokenism (Klages and Vetter 2013). Decisions are already made by politicians or, not uncommonly, by the administration. Sometimes, often, or even regularly, the ideas of planners do not meet the present needs of the local people, as they didn't in Trier.

Traditional citizens' participation, either on purpose or by chance, does not take into account the will of the totality of the people and/or specifically affected groups. Political groups without the option of attaining a majority, or specific groups, (e.g. city planners) try to use citizens' participation in order to attain a type of pseudo-legitimation in order to execute their will upon the affected population, who are not amused with such tactics. Citizens' participation and the result of the referendum regarding the petrol station clearly point in that direction. According to locals, the blue light of the patrol station was more than just an opportunity to shop during the nighttime and on weekends. For those living in the area, the light of the 24-hour "Blue Lagoon" was a symbol, a kind of a lighthouse, and a possible shelter (e.g. for women out after dark) in an otherwise completely dark or poorly illuminated area. People not living in that neighborhood do not necessarily take these aspects into account. According to the results of the referendum the abolishing or non-abolishing (70% for) of the petrol station was clearly not a significant issue to the people who argued and specifically voted against it in the PB of 2012. Most of them stayed at home. On the other hand, the planned abolishment of the petrol station was clearly very important to the local people who did not give up their resistance to city planners and city council groups, namely the Green Party in the most affected neighborhood. The referendum produced a huge victory because the supporters of non-removal of the petrol station participated in the referendum to a very high degree. Without the option of a referendum, possible in the state of Rhineland-Palatinate since 1994, the petrol station would certainly have been destroyed. This example gives the impression that there was never a fair chance of saving the petrol station. Only by the means of the referendum were the affected people of the neighborhood able to succeed. Citizens' participation often seems to be just an instrument with which to camouflage the will of the administration and specific political groups.

"Do More of the Same": Politicians and Planners Put Their Faith in Tokenism

Achieving a balance between the interests of the general community and specifically affected communities is a tricky task and hence another challenge for citizens' participation. Flood protection, for instance, is a compelling necessity along the river Rhine and this is absolutely agreed upon. To protect an area, downstream measures have to be implemented upriver. This is still agreed, but how? The execution of flood protection is possible in very different ways. The difference is mainly in how technical or ecologically sensitive the solutions are (Skublics 2018). In general, natural solutions need disproportionally more space and hence proportionally more people are then negatively affected. Natural retention areas need a lot of space because of the uncontrolled water flow. Moreover, the water will not go away and this provides ideal conditions for mosquitos to breed. The area of the upper Rhine approximately from the Swiss border to the city of Mainz was infected by malaria up to the nineteenth century (ZDF 2016). Environmentalists might be convinced that malaria is "natural" and therefore has to be reintroduced into the upper Rhine area in order to restore it to its natural state. Most local people think differently. Everyone remembering a year with extensive flooding and an explosive increase in the number of mosquitos never wants to experience it again. It is literally impossible to leave the house at sunset, play sports or work outside. Moreover, the affected communities lose a lot of opportunities and space for construction, agriculture and local recreation areas. Therefore, in a very simplified scheme, affected communities asked for a smart ecological solution with canals carrying away the water immediately after a flood and not leaving it to swamp large areas (Bürgerinitiative für eine verträgliche Retention 2018). Very much like in the case of the petrol station described above, the state administration is persisting with the purely ecological solution. Citizens' participation is only allowed if the ecological solution is not touched. Local citizens and municipalities do not accept this unilateral declaration and are fighting against what they see as uncontrolled flooding with political as well as legal actions (Zink 2016). This situation may impede flood protection for many years.

The waterside renaturation in Kressbronn, a small town by Lake Constance near the Austrian border, delivers a striking example of the project delay caused by the conflict between planners and local

residents and a subsequent legal dispute up to the highest possible court and the petitions committee of the state parliament (Landtag) (Regierungspräsidium Tübingen 2018). For approximately 25 years, administration and residents argued and fought about the project which should have started in 2001. It is the story of very lonely planners. Neither the affected local residents who are losing their access to the lake by their property, nor local environmental groups whose planned renaturation is doing more harm than good, welcome the planning (Koch 2014; Bündnis 90/Die Grünen 2018). The controversy is still far from being resolved (Baier 2017). At the moment, the project will be delayed for at least one more year (SWR Aktuell 2018).

The story of the petrol station and the other examples show that citizens' participation merely appears to be informing citizens, and teaching them how much the administration is taking care of their interests. These kinds of maneuvers necessarily disappoint people. It is apparent that the making of important decisions happens in advance, before participation even starts. Therefore, affected groups in particular often do not accept the results of citizens' participation events and rather experience them as "alibi" events. Instead of fighting the disenchantment of the people, which is the alleged goal of citizens' participation, it may even increase it. More and more resistance against projects and great delays due to legal objections and suing are the consequence. Due to our gamification criteria "alibi" participation measures clearly violate the aspects of openness of results and fairness of the game. Hoping to find openness and fairness, people take measures, such as referenda and lawsuits. As was mentioned in the beginning, citizens' participation—according to Schumpeter (1942)—always means a redistribution of power. Local politicians as well as decision makers in the administration seemingly are not delighted to share delegated or committed power with the people. This represents the main problem of "alibi" participation.

THE "STORY OF THE EXPERTISE OF CITIZENS": DELIBERATION WORKS BETTER WITHOUT THE PEOPLE

In 2008, the government of Rhineland-Palatinate initiated a series of participative events including, inter alia, six planning cells in different regions of the country to develop a citizens' expertise (Nexus 2018). The aim was to foster a planned local municipal administrative-territorial reform

with the help of citizens' participation. Hence, an advanced system compared to purely representative democracy was intended (Bundeszentrale für politische Bildung 2011). The aim of the reform was the organizational merger of small communities that did not seem efficient. Usually, citizens are not very much interested in organizational matters of their local administration as long as charges do not rise and the quality of service does not decrease. The approach showed some bizarre features. First of all, citizens' panels were implemented in communities with citizens not affected by the reform. Second, the most important issues under debate were not discussed within the citizens' panels. The most critical topic was selecting the communities that were to be dissolved. Critics argued that only those mayors should be removed who did not belong to the ruling party of the government, and hence, the ruling party will profit by having a larger number of mayors at the local level. Another important argument was that according to economic experts, communities performing well should merge with poorly performing one that had a high level of debt. Even if the government offered financial support to the merging communities, to some of the affected ones it seemed to be a bad deal in the long run. Additionally, there were discussions about who should merge with whom, but the government suppressed most of these considerations due to the fact that they would have triggered a reform of some of the country districts as well. Resistance against the reform came up for at least 9 out of 20 planned mergers, and at least 18 citizens' surveys and 15 local referenda were held. Both participative approaches of surveys and municipal referenda were not legally binding to the central government decision on the shape, size, and responsibilities of these municipalities. Citizens surveys, however, have no legal status at the municipal level and referenda do not have legal effects at the superordinate state level. So the mergers were adopted by law. One of the nine communities suing against the governmental decision was successful in the constitutional court. The merger had to be cancelled due to the fact that the government could not confirm its necessity for efficiency reasons. In the end, mergers were executed top-down from government to communities.

Here again, we have to note that the failure or non-workability of citizens' participation mostly resulted from the fact that decision making is restricted to small selected groups. Some of the examples show that the limitation to small groups is actually intended to enable the execution of a certain political and governmental will. In these cases, gamification is of no help because the most important feature of gamification

is a non-predetermined result of the decision-making that cannot be changed afterwards. Democracy, according to the Greek term *demos* refers to the whole population of citizens, or the common people (see the Introduction and Fig. 3.1). Deliberative and dialogue-based participation instruments are inevitably designed for small groups in order for them to come to a consensus. Moreover, deliberative and dialogue-based participation instruments work better when only randomly chosen people, who are not affected with the matter under concern, make the decisions. This is evident since small groups tend to eliminate participants with other political opinions (Buchstein 2014, 170). Again, this represents a violation of the inevitable principles of gamification. This applies to democratic elections where everyone has the same voice and the opportunity to participate. Additionally, it is very odd that citizens' participation—in both the deliberative and dialogue-oriented way—can only work without incorporating the majority of people and, moreover, without the people being directly affected. In which universe does this make sense?

The Story of "The People in the Sun" vs. "The People in the Shade" and the Problem of Traditional Planning and Participation

One of the most difficult problems facing citizens' participation is that the decision making or the producing of some inputs to decision making is usually limited to small groups. Most of the popular instruments, such as citizens' panels/juries, citizens' planning cells, and all other approaches rely on the personal presence of the participants (world cafés, future workshops and so on). In theory, the small groups should figure out a perfect solution for a decision, aka the *volonté general*, by means of deliberative and dialogic procedures (Fishkin 1991, 1997; Habermas 1992). In practice, large parts of the people, especially the people directly concerned, frequently could not take part and therefore had no voice with which to disagree. Obviously, deliberation and dialogue work better the smaller and more homogenous the groups are. Large groups with different people are much more likely to make different decisions due to having other interests and points of view. Moreover, groups made up of heterogeneous people, especially with various political orientations are very likely not to come to a shared understanding.

A striking example of different points of view is the extension of a federal road, the B10, to a kind of highway comprising four lanes instead of two in southwest Germany near the border with France (Landau to Pirmasens). It is the story of "the people in the sun" and the "people in the shade" with two failing mediations and an ongoing struggle.[2] To give some background information: The capitol of the region of the people in the shade, Pirmasens, is the highest indebted community in Germany, and also has the lowest life expectancy. The unemployment rate is about 12.6% while in the overall state of Rhineland-Palatinate the average is only 4.6%. The region is peripheral and its former industry of shoe manufacturing was displaced long ago. Accordingly, people and local politicians raised great expectations with claims that the road extension would foster economic development and therefore aimed at overcoming the crisis. The situation of the people in the sun could not be more different. They live in an area known as the Palatinate Tuscany, the largest wine-producing region in Germany with a mild and warm climate where figs and almonds grow. In addition, a lot of tourists come here and as a result the region is economically prosperous and has high average incomes. The conflict about the road extension was foreseeable because nothing seems to make less sense to the people in the sun than a freeway through the vineyards, and is not something seen as attractive to bait high-income tourists with. Very briefly and thus fictional, the lines of argumentation are as follows:

- People in the shade: We need the road extension and it will help us significantly. The people in the sun are not solidary and only think of their own advantages.
- People in the sun: We are sorry, but due to your peripheral location, a bigger road will not help you. On the other hand, the road will ruin our business because who wants to spend their holidays next to a freeway? Additionally, we do not want to live next to a freeway and the whole project will be very expensive due to the geographical constraints of the narrow valley. Thus, the project is financially and ecologically harmful to us and in general will not benefit you in

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[2] The propaganda of the pro group (the people in the shade) can be retrieved from: http://www.b10-4spurenjetzt.de/pages/die-buergerinitiative/presse.php, the opposing side (the people in the sun) e.g. http://suedpfalz.bund-rlp.de/fileadmin/bundgruppen/KG_Pfalz/Mobilitaet/Diskussionspapier_final2.pdf.

the end anyway. There is a lot of evidence from other approaches that this kind of infrastructure measure does not work out.

Deliberation and mediation could not bring the groups together. From the point of view of evolution and workability, the success of a concept, idea, or project like the economic improvement of a region by the extension of a highway cannot be determined in advance. Only the future—after the road extension—shows who was right. At the moment, only the decision of the superior entity, the state, can cut the Gordian knot. The road will be extended, but the resistance is not over yet.

The city of Horb on the river Neckar delivers a completely different story. Certainly, the situation was less complicated as in the case of the people in the shade and the people in the sun because obviously there are more winners than losers. Two national roads, the B14 and the B32, meet in Horb's city center and only a small bridge crosses the river, with permanent traffic jams, noise and pollution being the result. Obviously something had to give. According to the plans, an alternative crossing of the river would disburden the city center of approximately 10,000 vehicles every day but the plans also clearly showed that the new bridge would burden the people living close to the new route. Undoubtedly, the new route would be an improvement to the whole city and thus it was possible during the citizens' participation to convince the now newly affected people to accept the burden. However, it was possible to come to an agreement with the affected people about noise protection measures and compensations. After a series of information and consultation measures, a solution was found without any resistance (Regierungspräsidium Karlsruhe 2015).

The lesson learned is that if people, even those being negatively affected, are well informed about the pros and cons of different options from the very beginning of the planning stage, and are included in the elaboration of solutions, they are more willing to cooperate, participate, and be compensated than if they are simply confronted with ready-made plans explained by bureaucrats. Juergen Holzwarth, a road planner working for the state administration of Baden-Württemberg describes the "old planning paradigm" like this (Holzwarth 2013). The traditional way of citizens' participation mostly consisted of information events like public local council meetings at each stage of the planning. Citizens and local politicians could speak up and state their concerns. The information given to the public mostly happened at a rather late stage of the planning

process due to the fact that the concrete shape (e.g. the determination of the location and final route) usually takes place at the end of a long planning process and thus occurs directly before the decision-making process and official approval. Hence, the people often realized that their property and their living conditions would be affected to a significant degree and they reacted sharply against the suggested solution. The fact that citizens' initiatives spring up, appeals to local and regional politicians as well as the involvement of the media through the initiatives. Even if the planning administration picks up the concerns and campaigns in favor of acceptance, an understanding of the planning is nevertheless almost impossible to obtain. Ultimately, projects were frequently halted and delayed and the planning needed to be completely revised or was totally stopped.

Consequently, Holzwarth (2013) concludes that in order to avoid or mediate conflicts between citizens and the planning administration, the involvement of citizens should happen at an early stage of the planning process when the major specifications have not yet been determined. Objective discussions are still possible at that point and there is still a large scope for designing the project (e.g. different variations, routes and sites). This new planning paradigm is heavily supported by new technological innovations. In particular, new possibilities in the fields of visualization and virtual reality allow the development of a variety of possible plans and solutions at a relatively low cost, enabling citizens to understand the results, their consequences, and their impacts. From the point of view of gamification, this opens a completely new world of possibilities. The openness of the result is making gamification possible as such, and hence the design of the game is most important here. The setting of the rules must motivate and enable the players to develop workable realistic results: For instance, there should not be tunnels which nobody can afford. The rules of the game might be shaped according to the principles of systemic consensus (Fellowship for Intentional Community 2018). Systemic consensus aims to look for solutions that are free of conflict or at least have a minimum of resistance. As in the example of Horb, the aim is to find solutions where as many people as possible benefit and where the negative effects to other people are kept as low as possible at the same time. This is very similar to the concept of the Pareto optimum or Pareto efficiency in welfare economics, meaning a situation where any single alteration, such as an improvement, which brings a benefit to one person necessarily leads to a proportionally lower benefit to

others (Gabler Wirtschaftslexikon 2018). If a result like this is obtained, then the rules of the game will be judged as just and fair and so the highest possible acceptance of the result is possible.

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Behind the Scenes: What Empirical Evidence Is Telling Us About the Practice of Citizens' Participation

Abstract People want to influence politics but do not want to be politically active. People like procedures that do not impose much burden on them but which guarantee an influence on decision making, such as elections and referenda. People want a greater influence on politics. This means in effect that people want to be informed but only want to make a decision if significant issues are not going well. Politics is unpopular and trust in politicians is extremely low. Hence, the majority of people has no desire to take part in deliberative citizens' participation procedures. Representative democracy is better than its reputation—as measured by the demands of gamification. Gamification offers the possibility of bringing the majority and the politically active segments of society together, including planners and politicians.

Keywords Representative democracy vs. Direct democracy
Deliberation · (Dis)trust in politics · Civic virtues · Utilitarianism

Around three years ago, a newspaper published an article criticizing two mayors of large German cities regarding citizens' participation (Soldt 2015). The main points of criticism were:

- Damage of social capital. Opposing positions appear to be irreconcilable. Decisions are leaving deep wounds because of aggressive campaigns and subjective discussions

- Limited legitimacy of decisions due to low participation rates of special social groups only. Minorities are dominating the majority of people
- Many of the present-day citizens' groups consist of resentful people who are only willing to consider their own opinions
- Elected representative bodies, such as the city council, are disempowered.

The article gave a focused summary of the recent discussion about citizen participation in Germany.

The Participation Dilemma in Germany: The More Possibilities There Are, the More People Demand and Remain Absent

There is something akin to a fallacy of "a misplaced concreteness" about the willingness of citizens to take part in participation events in Germany in recent years. The absence of participants stands in stark contrast to the ever-increasing opportunities to become involved.

Nearly all empirical surveys about attitudes towards democracy and participation in Germany agree in one respect: People want a greater influence on political decision making. For instance, a nationwide survey in 2011 based on a representative random sample determined that 81% of the German population would like to have more opportunities for political participation. Moreover, 60% declared their willingness to take part in participative processes besides elections (Nanz and Kamlage 2013, 12). A crisis of the representative democracy system caused by disenchantment with politics was proclaimed. The trust in democratic institutions and their representatives is declining year on year (Crouch 2004). There is much truth in this reflection, but many people, such as scientists and those in civil society, draw the conclusion that people want to become politically active and want to routinely engage in dialogue and deliberative events. Sadly, this stands in stark contrast to the empirical findings (e.g., Fig. 4.1). The number and participation rates of all kinds of deliberative and dialogic methods and processes are rather poor and thus a matter of minorities (Vetter 2008, 15). Some scientists (Klages and Vetter 2013) came to the conclusion that the problem is rooted in the conditions for participation. In particular, the influence
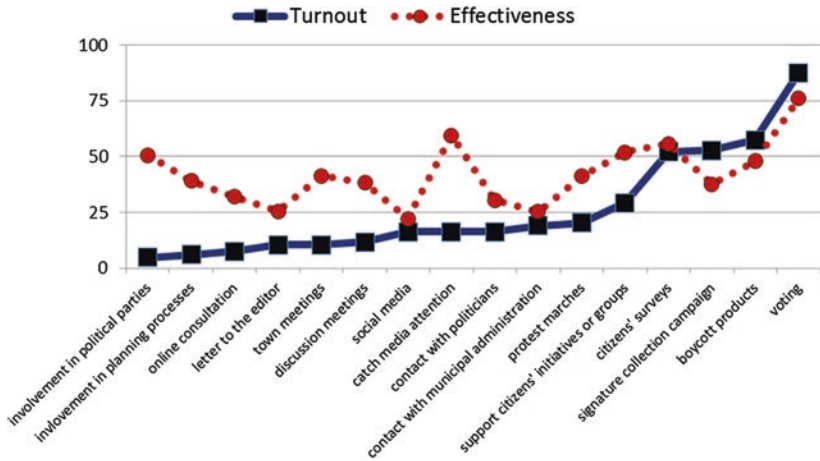
Fig. 4.1 Turnout (willingness to participate) and assessment of the effectiveness of participation instruments (Boje and Masser 2014) (valid) percentages

of participants on the results of participation events is more than vague. Hence, Klages and Vetter diagnose a widening of the gap between politics and the people (in Germany). This is totally in line with our principles about gamification (especially non-predetermined decisions). But, the problem has deeper roots. People demanding more opportunities for influence and to decide about public affairs in citizen surveys in Germany does not necessarily mean that they are willing to spend their leisure time discussing all kinds of public affairs with people they do not like, and vice versa. Many authors, like Hornig and Bauman (2017) deduce that based on the dissatisfaction with politics and especially the political parties with each other, and with the desire to have more influence on political decisions, people have an urge for deliberative participation measures without any empirical evidence. However, the opposite is actually the case. We will deliver a large amount of empirical evidence in the further course of this work.

Like Scooby-Doo and the Mystery Gang, we have to search high and low to find empirical clues in order to solve the mystery of the apparently growing request for opportunities to participate on the one hand, with increasing offers to the citizens to participate and the numbers of participants remaining at a low level or even diminishing, on the other hand.

Deliberative Methods Need Much Time and Effort and Are Unpopular

Initial insights have already been delivered in the previous section. As Schumpeter (1942) pointed out, the way that decisions are made is, besides the entitled group, the crucial factor. Figure 3.1 shows that the majority of people—even politically active people—prefer majority decision making compared to consensus or deliberation. In contrast, participative democracy (Nanz and Kamlage 2013) tries to fight the supposed crisis of representative democracy with dialogue-based measures like citizens' panels, juries, planning cells, world cafés, and planning for real etc., which the majority of people like even less! A nationwide representative survey in Germany by TNS Emnid (2011) commissioned by the Bertelsmann Foundation asked the following question: Is it possible that you would take part in the following participative proceedings? Of the respondents, 94% said they were willing to take part in elections. The next quoted item concerned referenda (78%) while attending a town meeting was conceivable to 64%. The willingness to get politically active online together with deliberative measures dropped to below 50%. For instance, the theoretical willingness to attend a future workshop came in at about 39%. Most unpopular was the engagement in a political party, at only 30%. However, when compared to reality, these figures are far too high. The democracy audit in Gießen (Boje and Masser 2014), reflected this and in addition asked the question of how effective people judged the different ways of participation to be.

There is a big gap between the rather high estimation of the effectiveness of the involvement in political parties and planning processes, and the small number of memberships and contributions to political parties of the population in Germany, which is under 3% (Masser 2013). Catching the attention of the media was also recognized as being very effective but obviously difficult to achieve, especially for ordinary people.

The most popular forms of participation, such as citizens' surveys, petitions, boycotts of products, and voting, were estimated to be very effective and obviously do not take much time and are therefore suitable for everyone with no need for higher education or obligations. This is equally applicable to referenda, which are very popular as well. An earlier survey in the city of Gießen in 2012, as well as a lot of other surveys (Viernheim, democracy audits 2002/2013; Klages and Masser 2009) confirm these findings. Political activity is unpopular. Furthermore,

deliberative measures and measures based on small groups are the least popular participation measures. The success of citizens' participation in regards to the number of participants seems to be dependent on the citizens' cost-benefit estimations. They do not want to do the dirty work of decision making, and history repeats itself. As in ancient Greece, the people like coming to the assembly, watching and listening to the different parties with their proposals and arguments and then like to decide by majority voting: "Quick and dirty". Obviously, the more citizens' participation is in line with the principles of gamification, the more the people will participate because their participation is easy and effective and is associated with the general human desire to play.

The city of Mannheim (MA) commissioned their democracy audit in 2013 and based it on a representative survey of its citizens (Van Deth and Schmitt-Beck 2013). Both surveys, Mannheim in 2013 and Gießen in 2014,[1] included a question about civic virtues. The respondents could grade their judgement of virtues on a scale from "very important" to "totally unimportant" (Fig. 4.2).

Apparently, people rate political activity or involvement as being much less important than actively taking part in elections. People do have a life beyond politics. This is totally in line with our preceding analysis and other research (e.g., Ewen et al. 2013, 102). People mainly take part in elections or referenda in large numbers but do not participate in other, more intensive and time-consuming participation activities. Many value and volunteer involvement studies have shown that only very few citizens do volunteer work in the political arena (Klages and Masser 2009). Compared to other areas, such as religion (church), education (school), sport or entertainment (choirs, theater etc.), volunteering in the political arena is not very popular. Moreover, political volunteering often is very time consuming. According to the findings of our empirical citizen surveys, there are two major determinants of citizens' participation:

1. The effectiveness of participation instruments—how binding are the results and how much influence do I have?
2. The cost of involvement (a) especially the time requirement, and (b) the inconvenience, for instance peer pressure, and uncertainty in dealing with political activists.

[1] Mannheim is a regional center in the metropolitan area of Rhein-Neckar with approximately 315,000 inhabitants. Gießen is a university city with approximately 80,000 inhabitants.
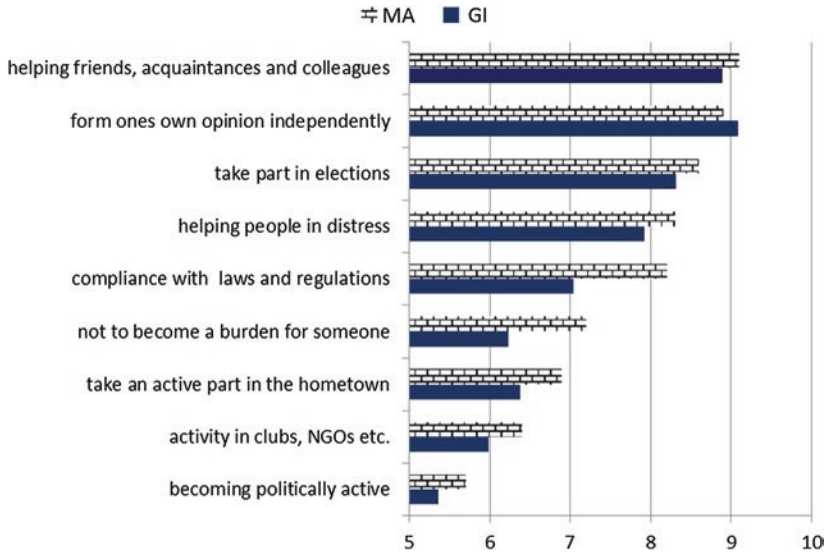
Fig. 4.2 Judgement of civic virtues: (two democracy audits in Mannheim: MA and Gießen: GI), average (arithmetic mean)

People Distrust Politics and Like to Keep an Eye on It

The outcome to the question "Are there enough opportunities to participate in municipal affairs?" in the Mannheim Democracy Audit (a representative survey of citizen) delivers another part of the puzzle to complete our picture about the question of the apparent contradiction between the demand to influence political decisions of the citizens and their willingness to take active part in participative events (Fig. 4.3).

Obviously, the result of the democracy audit in Mannheim stands in sharp contrast to the national surveys mentioned above with approximately 81% wanting more opportunities to participate. Only 13.4% of the citizens believe that their opportunities to take part in the municipal decision making are not sufficient. On the other hand, most of the people are happy with the existing opportunities (43.2%). A total of 8.4% of the people surveyed showed no interest at all. This might correspond to the 19% not wanting more opportunities because there is a large group (35%) with no actual interest in participating but who wish

Fig. 4.3 Assessment of the participation opportunities in Mannheim (Van Deth and Schmitt-Beck 2013)

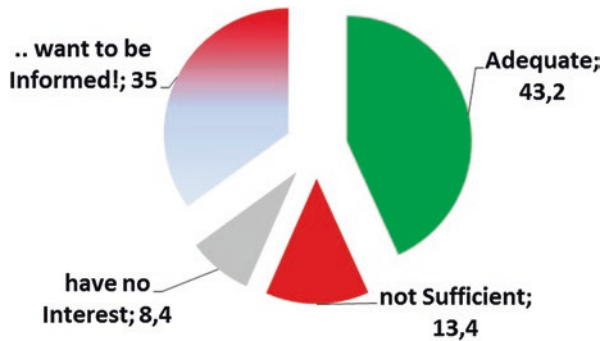to be informed about everything going on. Together with the 43.2% that think the opportunities for participation are sufficient, the group of 35% who simply want to be informed, comprises the large majority. But what does "just want to be informed" actually mean in practice? Obviously, there is a huge potential of "sleepers" that may be activated, depending on the case. On the other hand, there is only the potential for about 13.4% of the population to permanently be involved in citizens' participation. This group represents the main source for winning participants for any kind of dialogic and deliberative participative formats.

In summing up the insights that support our line of argument, our answer is clear: What people want is to have the right to delegate the dirty work to people or parties, but if things do not turn out as desired they demand to have the final say. The democracy audit of Gießen asked the question of how the democratic system should work, representatively or through direct democracy? (Fig. 4.4).

The politically more active of the open Internet survey in particular clearly shows a tendency towards direct democracy. About 25% of the people surveyed expressed the view that political decisions should be made almost exclusively (5) directly. Another 25% thought that mostly direct democratic decisions (4) should rule and about 23% adopted a moderate attitude of partly direct, partly representative. This adds up to almost three-quarters of the total. This means that the advocates of a representative (purely parliamentary) system (opting (2) or (1 = "strictly representative")) are outnumbered. The result for the
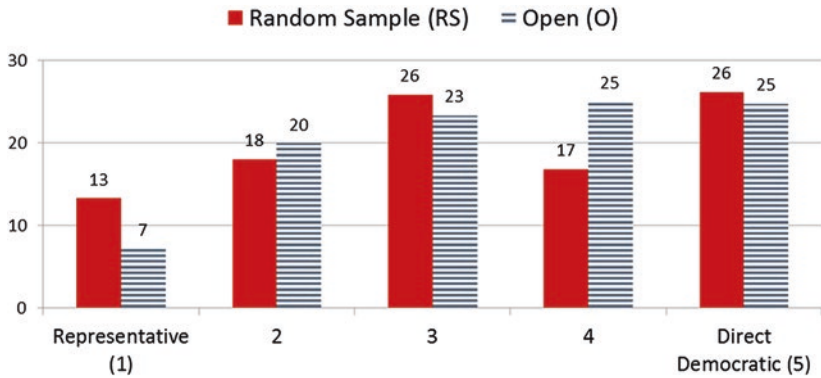
Fig. 4.4 Representative or direct democracy? (Boje and Masser 2014) (valid) percentages

representative random sample group is even more interesting due to a bimodal distribution of preferences. As already found in the open survey, there is a large number of people who opted for rather radical direct democratic (5) decision making (ca. 26%). Referenda and citizens' decisions should be at the heart of the political system. On the other hand, an equal number of people (26%) expressed an attitude somewhere in the middle, being a mixture of representative and direct democratic decision making. Together with the respondents expressing an attitude towards the two endpoints of (1) totally representative and (5) totally direct democratic, the middle view actually forms the majority. In conclusion, most people want a mixture of representative and direct democratic decision making with a clear tendency toward the latter. Moreover, there is a significant number of people—approximately one-quarter of the German population—advocating a total shift towards direct democracy. To understand this, we might consider that referenda are not legal at the federal level in Germany. The results of many recent elections in many Western countries (e.g., Italy, Greece, France, Poland, Hungary, United States and Germany) seem to indicate that the representative system is not offering enough responsiveness in the opinion of many people. A headline of the recent election in Austria was titled: "Worst Result for Establishment Party since Hitler Rule" (Durden 2017) and for France the CNBC headline read: "Blow to Establishment" (Gilchrist 2017). These so-called protest or populist parties or candidates are on the rise or have even already surpassed the old establishment.

To sum up, as we have seen, there are some controversial findings in the present section. On the one hand, elections appear to be the most popular instrument of political participation because they are easy and effective. Deliberative and dialogue-oriented participation measures are not popular due to their unclear effectiveness, high effort in relation to the return, and the mostly ambiguous unclear mode of decision making compared to voting. On the other hand, people are not happy with the system of representative decision making but want to be comprehensively informed and involved, mostly by referenda, if they think things are not going well. In other words, people like to delegate the dirty work of political decision making to politicians but they also like to keep a close eye on what the politicians are doing.

CRISIS OF REPRESENTATIVE DEMOCRACY: CITIZENS' PARTICIPATION AS THE WRONG MEDICATION FOR A PHANTOM PAIN?

Many scientists diagnose a growing gap between citizens and the ruling elites in Western countries (Nanz and Kamlage 2013; Klages and Vetter 2013). Undeniably, the trust in elected persons and bodies is dropping. In the United States the "public trust in government remains near historic lows" (Pew Research Center 2017). To give some comparative figures, in the 1960s, nearly 80% of Americans trusted their government. Today the figure has dropped to about 20%, which is not only due to the Trump crisis. There has been a constant decline over that time, being at its lowest level in the 1970s. Since then, there have been a pattern almost like business cycles with ups and downs where the ups are often associated with the election of a new president. Sooner or later, the confidence bonus of the new president is used up. In any case, the euphoria never lasts long and in the long run trust in government has diminished more and more over time. In 2009, public confidence in politics and politicians in Germany and other European countries had reached an historic low.

A societal value change occurred in all Organisation for Economic Co-operation and Development (OECD) countries over the last century. Klages (2001) summed up the societal value change as "a shift from the performance of one's duty and obedience to self-expression and development." It may be assumed that this societal change of values is a major cause for the citizens' loss of confidence in politics and politicians. However, the general thrust of the societal value change is grounded

in the desire of personal independence and individual opportunities for action which result in a need to (co-)decide on matters concerning one's own affairs (see Klages and Vetter 2013, 18). The taking over of tasks, commitment, and motivation are based on a person's own views, thoughts, values, and belief. It must be held that there has been a change in political participation culture: political participation has become more and more of an individual act. Traditional institutions like trade unions and political parties tend to lose their significance as mediators of political participation (Fig. 4.5).

Recent research shows that the majority of German citizens (71%) are socially engaged in initiatives and associations (Gensicke 2006, 11). These numbers disprove the assumption that citizens are becoming more and more inactive. People rather prefer to temporarily support projects to generally having a long-lasting membership of an organization. According to Gensicke and Geiss (2010, 121f.), the orientation towards the common is a central incentive for voluntary activities in political parties, churches or local projects. Nonetheless, we can see a gap between the willingness to participate and the low participation rates in numerous participation opportunities.
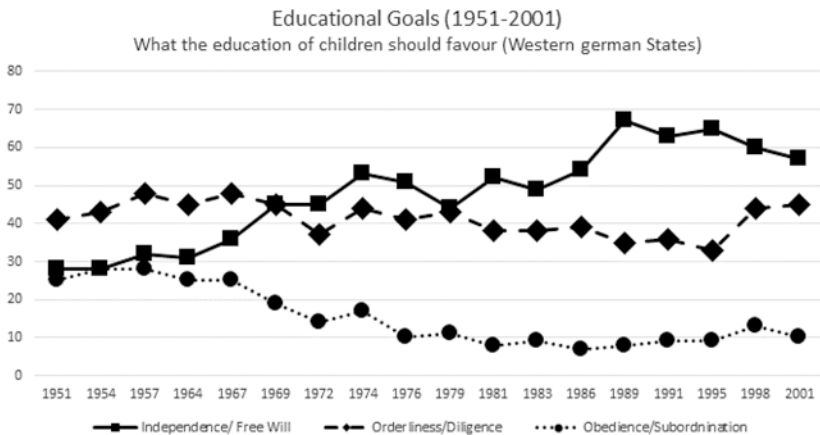

Fig. 4.5 Change of educational goals in the German population, 1951–2001 (Based on annual representative sample surveys of the German population from 1951 to 2001 by the renowned EMNID-Research Institute (Masser and Mory 2014))

Confidence between decision makers and citizens can be seen as a key factor in participation and trust in the results of political decision making. According to Klages and Vetter (2013, 37), the citizens' willingness to participate depends on their level of confidence in the political effectiveness of their participation activities (Fig. 4.6).

It seems that it is the political parties and the people behind the parties that citizens do not trust. All relevant surveys uniformly confirm this "tricky-dicky-effect" ("tricky-dicky" is the derisive nickname of former US President Milhouse Richard) as causing a decline in the trust of politics and politicians in Western countries. The result is a growing disenchantment with politics. At this point it is worth looking back at Schumpeter who argued—maybe somewhat precipitately—that "beyond direct democracy lies an infinite wealth of possible forms in which the 'people' may partake in the business of ruling or influence or control those who actually do the ruling" (Schumpeter 1942).

According to the empirical findings presented in the previous sections, most people do not want to take part in the political decision making personally but want to be informed, control the political establishment and have the right by referendum to stop political elites. To complete the Schumpeter quotation: "None of these forms [by which people partake or control], particularly none of the workable ones, has any obvious or exclusive title to being described as Government by the People [...]: the people never actually rule but they can always be made to do so by definition" (Schumpeter 1942). This means that unfortunately, the famous
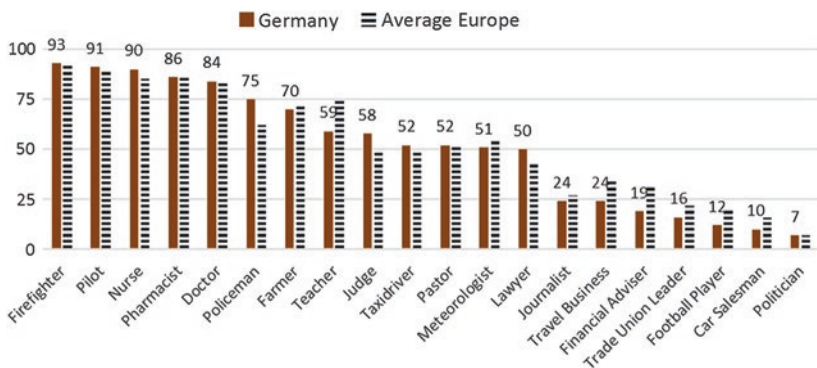

Fig. 4.6 Trust in occupational groups, percentage "very high" and "rather high", survey of 16 European countries, *n* = 23,287 (Germany *n* = 7037) (Kalb 2013, 4)

Abraham Lincoln Gettysburg Address of November 19, 1863 should be modified: Democracy is not a government of, by, and for the people, it is rather a government of, for, and hence necessarily controlled by the people.

Schumpeter (1942) pointed out that a total direct democracy where all decisions are made by all of the people is only possible in very small communities like the ancient Greek polis or the New England towns. Despite the disenchantment of the people with political parties, elections of politicians together with referenda are still the most popular democratic instruments in Germany by far. Advocates of deliberation and dialogue-based measures (Nanz and Kamlage 2013) together with the media insist on declaring a diminishing voter turnout in Germany. This is simply not true. Looking at the development of the turnout rates in Germany since 1945, it becomes clear that there is a remarkable decreasing voter turnout especially at the municipal level (Masser and Fischer 2015). At the state and in particular at the federal level, voter turnouts have cyclical fluctuations but remain relatively stable. The turnout levels since 1990 match the delineated order of importance of the different hierarchical political levels perfectly. Elections at the federal state level have the highest voter turnouts followed by the state level. Voter turnouts at the local and municipal levels have experienced a dramatic decline. The problem of the false assumption of a diminishing voter turnout can perhaps be traced to German Unification in 1989. The voter turnout in the six new federal states remained significantly lower than in the old West German states (Bundeszentrale für politische Bildung 2013). Worth mentioning is, that since 2009 there has been a trend of increasing voter turnout in the new East German States. In Saxony, the voter turnout in federal elections in 2009 was 65.3%, 70% in 2013, and 75.4% in 2017 with the alleged populist right wing party AfD (Alternative for Germany) getting the majority share of the votes in Saxony in 2017. The voter turnout in federal elections in the eight "old" West German non-city states was 76.8% in 2017, nearly the same number as in the first election in 1949 when it was 78.5%. Since 1990, the voter turnout at the federal level has remained relatively stable at around 78%.

At the beginning of the Federal Republic of Germany in 1949, voter turnouts at state level and municipal level were very similar. Since the 1970s voter turnout at state level has dropped significantly, but since the year 2000 figures have stabilized. In the largest state of Germany, North

Rhine-Westphalia, the voter turnout increased from 56.7% in 2000 to 65.2% in 2017. However, since the 1990s the voter turnout at state level has been approximately 10% lower than at the federal level. A real dramatic decline in voter participation in Germany occurred at the municipal level. From 1949 to 1990 the lowest turnout rates were about 75%. Since 1990 figures have dropped about 25 percentage points. Average turnout rates were at around 50%. Is it coincidence that voter turnouts at the municipal level dropped dramatically at the very same time that participation opportunities were introduced, particularly at the municipal level and only partly at the state level, but not at the federal level (second participatory boost)?

Since people have had the opportunity to take part in direct ballots, such as in the direct election of their mayor and, pre-eminently, have had the ability to decide by referenda, as in the state of Hesse, for example, at the municipal level since 1992, election turnouts have fallen dramatically. At an international conference (2014 EGPA Annual Conference, Speyer, Germany, September 10–12, 2014), following the presentation of our paper titled "Citizens' participation: Is citizens' participation killing election turnouts—disillusionment with politics or a normal adaptation to the societal value change?" Swiss participants responded during the evening reception regarding the relationship of elections and referenda in Switzerland: "I must admit that occasionally I did not take part in elections because I was aware that important issues will become subject to a referendum." If we look at the turnout rates of municipal referenda in Hesse since their introduction, we can see that the participation of the people is very volatile as sometimes even more than 80% of the electorate take part.

The average turnout rate in Germany lies at about 50%, which is more or less in line with the turnout rates of municipal elections in Hesse. In the year 2002, the highest turnout was 85% and the lowest near 17%. In 2013, 431 municipalities existed in Hesse, and hence referenda had taken place in fewer than ten of the municipalities since 1995. Obviously, some of the subjects were significant to a vast majority of the electorate (85%) while other subjects only mattered to a rather small part of the people (less than 20%). According to the statistical data, two points stand out: First, the system of representative democracy seems to work not as badly as the permanent complaints about the disenchantment of people with the system might indicate. People take part in elections if they consider the subject is important, but they want to have the opportunity to

initiate a referendum if it appears to be necessary. That is, the decision making of political elites is not complying with the will of the people, either that of the majority or that of specific groups. Thus, from the German perspective, the problem is not that the people disrespect the system. The system, with its political elites, does not respect the people by not allowing them to decide about the most important issues or by trying to push through decisions against the people's will. That is the problem of the disenchantment with politics in Germany. Second, not every seemingly political issue is significant or important to the greater number of people. Viewed positively, this expresses the fact that most people are not sticking their noses into affairs which do not concern them and only political or environmental activists assume that everything is political and that they personally must take part in every aspect of decision making.

Beginning in the early 1990s a new wave of participation opportunities focusing on codetermination of citizens emerged in Germany in a way that was very similar to the development of many OECD countries (Masser and Fischer 2015). The introduction of citizens' initiatives and referenda at the municipal level, but also in federal states, could be assumed to be the most significant part of the participation boost in Germany. As in Switzerland, it is a huge success story, not merely because of the number of referenda in the first place, but because it seems impossible to withdraw the option of a referendum, once introduced. The people will never accept the withdrawal (Kaufmann et al. 2005). At the municipal level, a little more than 5000 referenda were held from 2003 to 2015. During a period of 13 years, almost every other one (50%) of the roughly 11,000 German municipalities had a referendum (Rehmet and Weber 2016). This is not very impressive but is still a significant number. From the point of view of workability, an exclusive directly democratic system where all decision making is reached through referenda or in town hall meetings is not possible. There are too many, mostly boring, day-to-day decisions to be made and not enough people willing to decide about the everyday business in the municipality and, moreover, not enough people willing to decide about matters not concerning them. Therefore, the opportunity to have a referendum seems to be a useful add-on to representative democracy. It helps to improve the responsiveness of the political system and with regard to the historic low level of trust in government and politicians in Germany, it seems to suit the current climate.

In conclusion, the introduction of referenda at the state and especially at the municipal level means a significant development towards gamification according to our frame of reference: Obviously there is more openness and competition in decision making. The ruling elites are not able to predetermine the results. To the people, the modes and rules of decision making must appear to be more comprehensible than the backroom negotiations of the political party business. If the subject to be decided on is significant, then the vast majority of people take part in the decision-making process (see for instance Fig. 4.7 showing that it is possible to activate up to 85% of the electorate). However, gamification, and namely the add-on of referenda seem to be a successful and workable means by which to improve the performance of representative democracy.

A community totally based on direct decision making of the people is restricted to very small entities as in the ancient Greek polis. In Switzerland, where citizen lawmaking is pushed to the limits but is still part of a representative democratic system, there are four fixed dates per year on which all referenda, namely federal, canton and municipal, are held. Otherwise, the willingness to participate might be strained, especially at the municipal level, so fusing together the most important federal decisions with the cantonal and municipal ones acts to safeguard a minimum of participants for the latter.
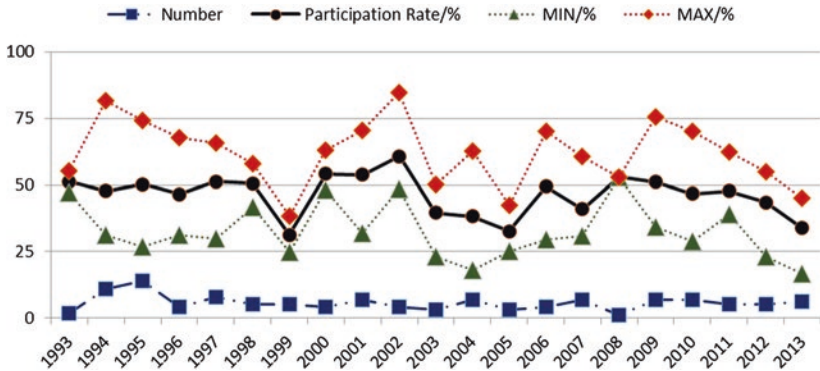

Fig. 4.7 Turnout rates of municipal referenda in Hesse, 1993–2013 (Statistical Office of the Federal State 2015), percentages

If we want to find a community totally based upon deliberation and consensus decision making we have to go a long way back in history. Biology and anthropological research has identified three stages of complexity in the development of human societies, each with consequences for cooperation and participation (Wilson 2012). Only in the very early hunter-gatherer stage, could decisions be made in an egalitarian way. Small groups of about 20–30 individuals needed to cooperate in order to survive in a dangerous environment with predators and with rival groups that were even more dangerous than the predators. Thus, the cohesion of the group was the foremost goal and decisions had to be made consensually, usually during shared meals around the camp fire. After the Neolithic revolution involving the invention of agriculture and animal breeding, small groups became tribes and subsequently societies. Necessarily, different professions and hierarchies emerged.

However, to base decision making—even limited to important decisions—of a current modern country is courageous. There is no reliable data or information available from Germany regarding how many deliberative participation measures had taken place there, nor regarding how many people participated (Nanz and Kamlage 2013; Vetter 2008). Existing data do not show that deliberation is reaching many people. Since the introduction of planning cells (aka citizens' juries etc.) in the late 1970s, more than 8000 people have participated in them according to Dienel (2002). This means an average of 400 individuals per year, or 20 planning cells each with 20 persons on average. Mathematically this means that each German municipality of the roughly 11,000 in existence would have a planning cell every 500 years. According to Klages and Vetter (2013) there was a wave of informal deliberative participation methods swamping Germany. To name just a few of the new dialogue-based and deliberative methods: There are future workshops, district conferences, world cafés, citizens' juries aka planning cells aka citizens' panels, local agenda 21 projects and many more. The number of different deliberative and dialogue-based methods and measures appears to be innumerable but stands in stark contrast to their usage and success. According to Klages and Vetter (2013) these measures could not enthuse a considerable amount of people to take part in citizens' participation. The limitation to small groups partly explains the limited effect. Additionally, the use of these methods only works incidentally and not systematically. Most importantly, there is no guarantee that the results of the deliberative events have any influence whatsoever on the decision

making of the responsible bodies—mostly city councils—due to their informal character.

The behavior of the elected bodies needs to be understood: Deliberative measures are frequently demanded by small political groups, some of which are not even represented in the city council or parts of the administration. According to the previously outlined empirical findings, and especially the democracy audits, only 6–13% of the people are willing to participate in deliberation or any other time-consuming action. Moreover, it is probable that people willing to take part in deliberative procedures have a political preference. Therefore, it is very likely that the findings of the small deliberating groups do neither represent the majority of people nor the voters of the major parts of the city council or other elected bodies. Hence, sometimes the demand for deliberative small group decision making in Germany appears to be similar to a bolshevist attempt to take over power from democratic elected bodies like city councils. The demand for more citizens' participation, even by marginal groups of society, causes a dilemma for the major representing parties: Obviously there is a planned coup to take other power by small parts of the people, but how to deny citizens' participation? This presents a challenge for PR. Thus, citizens' participation is sometimes carried out in a pro forma manner and appears to be part of a purely symbolic policy. For example, there are rumors that a mayor and the ruling party agreed to introduce a participative budget demanded by the communist party in the city council, which was only represented by very few people. The participative budget project was run with minimum resources due to the poor financial situation of the city, and, as expected, only a few people took part and the results of the PB were moderate, to put it politely. Due to this limited success, the PB was discontinued. The mayor announced that he or she was not against citizens' participation, but the PB just did not work! It is not possible to quote any evidence, which is perhaps understandable in cases involving this kind of behavior. However, it is highly likely not to be a one-off scenario.

Moreover, deliberative measures often seem to be symbolic politics. The examples explained above relating to the petrol station in the city of Trier, and the territorial reform of Rhineland-Palatinate surely point in this direction as well. This should remind us that it is not how decisions are made in the first place which constitutes democratic decision making, but rather the checks and balances that exercise control over the

ruling elites (Schumpeter 1942) preventing abuses of power and the subsequent transition to dictatorship and tyranny.

EQUALITY AND FAIRNESS: ONLY ELECTIONS AND REFERENDA SCORE WELL

Maybe the most serious problem of citizens' participation with respect to the involvement of citizens in planning and political decision making concerns the favoring of the socially better-off parts of society (e.g., Geißel 2008). If citizens' participation aims for a redistribution of power in order to favor the have-nots, then empirical findings concerning the social structure of the participants is disillusioning. Usually, those people who are already politically active take part in deliberative measures and events due to their need to be able to express their thoughts and ideas eloquently and persuasively. Thus, participation is supporting people who know how to address an audience and make their opinion prevail. These are usually people with a high level of education and income, predominantly male and usually aged between 40 and 60. Furthermore, well-organized interests together with new "basis-elites" benefit. The interests of small groups and a pseudo-democratic takeover of power of these elites might be the result causing the interest in politics to grow instead of diminishing. Not more responsiveness to the needs and wants of the people and transparency will be the result, but quite the opposite—a regime by small elites. To paraphrase Gabriel (2013) we have to admit that there is a gap between the utopian goals and the empirical reality of citizens' participation in Germany.

Gabriel (2013) used the data of the German General Social Survey (ALLBUS), which collects data on attitudes, behavior, and social structure in Germany every two years (ALLBUS 2016), in order to figure out the influence of four key factors on participation, namely socioeconomic status, sex, age and migration background. Four different ways of participation were considered: taking part in elections, traditional (e.g., membership in a political party, contacting politicians or the administration), protest (e.g., taking part in demonstrations, boycotts of products, citizens' initiatives) and finally online activities. The ALLBUS data delivered the same results as the democracy audits mentioned before and many other surveys. Elections are by far the most popular measure through which to participate. About 80% of the Germans make use of

them. From 1988 to 2008, more and more people signed petitions, with an increase from about 25% in 1988 to approximately 50% in 2008. All other measures, like taking part in political debates (25%), joining a citizens' initiative (20%) or a political demonstration (15%) remained more or less at the same level. The membership of a political party holds the last position at below 5%. Differences between the sexes are not very remarkable and there is an equal willingness to vote and to protest. Then again, women are less active by about 10 percentage points in traditional participation (e.g., membership of parties) and by about 4 percentage points online. The older German people become, the more they take part in elections and the less they are active online. The willingness to take part in protest actions is rather high when people are young (about 60%) and drops massively after the age of 45. The percentage of young people willing to take part in traditional participation measures is rather low (about 20%), but the number rises steadily to 40% in the age group of 45 to 60. Thereafter the share drops to 20% with the reason possibly being that be that you need to have a political career before the age of 45, otherwise you rather dismiss it. People with a migration background are generally less politically active, especially concerning protests (27% lower than the native German population) and traditional forms (18% lower than the native German population) and people with a migration background do not take part in elections in the same way as non-migrants (19% lower than the native German population). However, with 68.5% of the people with a migration background taking part in elections, the number is still far above all other means of participating in both absolute and relative terms (Gabriel 2013) (Fig. 4.8).

When comparing all socioeconomic aspects like sex, age, and income etc., educational levels show the greatest unequal distribution of participation, especially when participation is more time consuming and requires more skills and knowledge, for instance, knowing how to start and organize a citizens' initiative. Remarkably, online participation is most popular with freelancers with an academic background with a percentage of 31%, public officials participate online at 17.6%, clerical workers at 13.1% and workers use it less than 6%. On the other hand, the difference in the participation in elections between the different groups in society, especially with respect to educational and income levels, is by far the smallest. While elections and referenda appear to be the real backbones of a democratic system, new deliberative and dialogue-based measures like citizens' juries, participative budgeting, future workshops
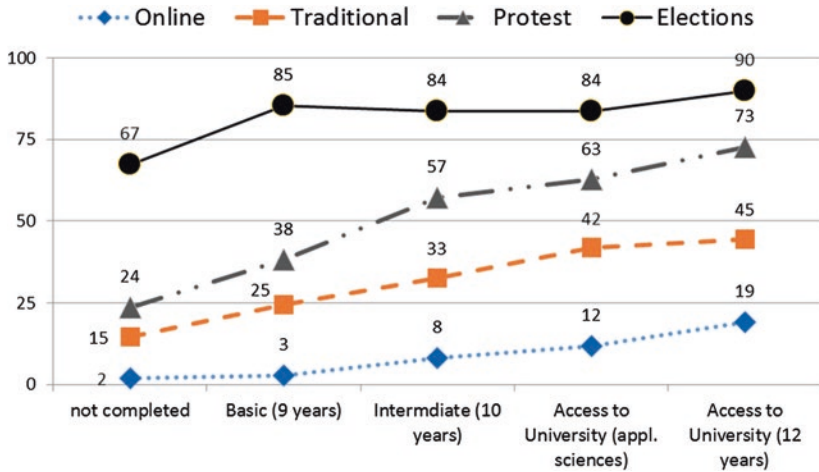
Fig. 4.8 Educational level and political participation in Germany 2008 (Gabriel 2013)

and many others appear to be the attempt of academic elites to take over power in the name of the people in the absence of commissioning. Once again history repeats itself; revolutions, even grassroots ones, are promoted by small groups of educated elites.

Between 2010 and 2012, the German Research Institute for Public Administration Speyer carried out three citizens' surveys with an identical subject: budget consolidation.[2] While two of the concerned municipalities, Tübingen with 78,000 inhabitants and Gießen with 78,000 inhabitants are university cities with a proportion of approximately 30% students, Haßloch is a small town with only 20,000 inhabitants. Interestingly, results did not really differ, especially in terms of the participation rates. A twofold survey methodology was used: a random survey based on the official register of residents in order to produce representative results on the one hand, and an open survey based on an announcement in the media and the municipal homepage on the other

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[2] See for instance, Masser, Kai and Linda Mory, 2014, Bürgerbeteiligung im Web2.0. Zur aktuellen Konjunktur eines langfristigen Trends, in: Dittler, Ulrich and Michael Hoyer (eds.), Social Network—Die Revolution der Kommunikation, München: kopaed, 235–259.

hand. The first group (random survey) was actively contacted by an official letter signed by the mayor, while the second group (open survey) was recruited through self-selection. The participation rates show exactly the same biases as those of the democracy audits as well as the ALLBUS data: Men are more politically active than women, the youth mostly do not care, elderly people vanish but, most importantly, higher educated people dominate. Fortunately, by drawing from a random sample these biases can be obviated. To be more precise, each bias can be avoided apart from the influence of education. However, compared to the open survey the random sample delivered a much better and almost exact picture of reality. The most striking differences between survey results and reality concern the educational level of the people questioned (Fig. 4.9).

While the random sample delivers an almost perfect representative picture of citizens with regards to age and gender, the percentage of women as well as of both young and old people in the open survey is much too low. Moreover, the random sample shows a bias in the direction of an overrepresentation of people with a high school education. This bias is by far bigger in the open surveys where people with only secondary education in particular do not play any role even if they represent the majority as in Tübingen and Haßloch. The worst part of this finding is that the small group of people who put themselves forward for citizens' participation are neither typical nor representative of their group. The twofold structure of the citizens' surveys allows a differentiated analysis of the results. In general, it was observed that the results of the open survey groups diverged from the random sample, the smaller the number of persons in the open survey was (Klages et al. 2008).

In looking for an answer to this effect, statistics can help us (Lavrakas 2008). The statistical concept of representativeness is based on probability theory. A very brief and simple explanation can be given using the example of throwing a dice. Everybody knows that it is almost impossible to throw exactly 1, 2, 3, 4, 5 and 6 within six throws. If the dice is thrown a hundred times the likelihood that each number appears with the same frequency is much higher than with a mere six throws. If a dice is thrown a thousand times and provided that the dice is not loaded all numbers from one to six appear with virtually the same frequency. As a result, election forecasts are usually based on about 1000 interviewees, and the improvement of the certainty of the prediction diminishes considerably after 1000 despite the increasing number of interviewees, while the costs rise constantly. In a citizens' jury, there are generally

Percent (%)	Gießen (2012)			Tübingen (2010)			Haßloch (2012)		
	Real	Random Sample	Open	Real	Random Sample	Open	Real	Random Sample	Open
Sex									
Women	51	51	38	54	55	43	50	50	34
Age									
< 25	21	18	9	15	14	9	14	9	3
25-44	38	34	39	40	38	49	32	28	27
45-64	28	32	41	28	34	36	35	42	59
> 64	13	15	11	17	14	6	19	21	12
Formal Education	Real*			Real**			Real***		
Pupils/Students	-	1	-	1	1		-	-	-
Secondary	24	13	5	43	7	3	49	38	8
Intermediate	41	25	19	28	20	11	26	34	25
High School	35	59	75	25	72	85	25	28	67

Formal Education/Real: *School Leavers Hesse /**Average Baden-Wuertemberg /***Average Region (District)

Fig. 4.9 Turnout of three citizens' surveys on the issue of a municipal budget. Percent values. Real/Actual figures according to the municipal resident registers. Real formal education figures according to data from the Statistical Office of the Federal States

around 20 people, and assuming that there are three women above the age of 65, how likely is it that these three women represent all aspects of the population like migration background and political orientation, along with many other aspects such as transgender issues? That is even more unlikely than winning the lottery if we take into account that this magic coincidence must cover all characteristics like youth, gender and so on. People in a citizens' jury might be female, and of a certain age, but cannot be both gay and straight, both left and right politically and have a migration background at the same time. Another important issue relating to citizens' juries and the principle of representativeness is the necessity of random selection. According to Klages and Vetter (2013, 46) only 5–10% of the incidentally selected persons are willing to take part in a planning cell. This is fully in line with the results of the democracy audits. According to the findings relating to the different groups of survey respondents, small planning cells or jury groups are anything but representative. Hence it appears to be a good instrument with which to manipulate political decisions.

The German city of Viernheim, with 32,500 inhabitants, has conducted nine citizens' surveys since 2005, using the twofold method of a random sample together with an open online survey. The issues were manifold: local democracy and participation, security, quality of life, and volunteering, to name just a few. In the beginning, the municipality tried very hard to motivate people to take part in the open survey and become a member of a survey panel. Virtually every household got an invitation from the city signed by the mayor with the appeal for them to participate. The success was overwhelming. In the first survey in 2005, the proportion of the open survey reached about 40% of the total turnout with the random sample at 60%. This is an unrivaled high proportion of open survey participants in relation to the random sample. Even if the activation of citizens appeared to be very successful, it was also very costly and, as we saw before, yielded no representative results (Masser and Mory 2014). Nevertheless, the municipality prolonged their efforts to get people to participate in the open survey but could not perpetuate the drive of the initial stage. Finally, since 2011 and with climate protection as a theme, there have been no special efforts made to promote the open survey. The proportion of participants of the open survey to the total number of participants decreased to 10% and below, while the turnout rate of the random sample remained between 25 and 50% according to the subject matter.

Seemingly, people do not trust political parties and politicians to a high degree. The question arises of how to control political decision making? Being permanently politically active seems not to be an option because the majority of people have other priorities such as a career, family, and hobbies etc. Periodical elections together with referenda appear to be the right way to keep the selfishness of political parties and activists under control. Moreover, there is a good division of labor between elections and referenda. Elections allow the expression of general political preferences, while through referenda people are able to correct or rectify decisions which are not in line with their convictions.

The lesson here is that it is a hard and costly business to enthuse people for citizens' participation. Gamification is a possible option that could be used to improve the situation.

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Citizens' Participation—How Gamification Can Help Citizens' Participation to Flourish

Abstract Porto Alegre seems to be the role model for participatory budgeting (PB). However, on second sight, with a turnout rate below 3% of the population and the loss of interest by groups wanting to see their wishes fulfilled, the success of Porto Alegre is not particularly impressive. In contrast, the PB of Potsdam, in Germany, has witnessed a steadily increasing participation over the last 10 years to currently more than 10% of the electorate. The secret lies in the gamified concept of the PB, which is shaped very similarly to the format of *American Idol.* Gamification is also successful in the field of large infrastructure projects. The key success factors are: choice of substantially different variants (e.g., alternative routes, simple, transparent and fair rules, deliberation at the beginning, and majority voting at the end).

Keywords Participatory budgeting · Porto Alegre · *American Idol*
Participative democracy · Legitimacy

Porto Alegre and the High Hopes for a New Democracy (Old Wine in New Bottles?)

Porto Alegre in Brazil is always quoted as being the birthplace of participatory budgeting (PB) in 1989 (e.g., World Bank 2008; Bhatnagar and Rathore 2003). Moreover, it is the showcase for participative democracy due to its alleged huge success. Since 1990, about 40,000 people

have participated and the most frequently reported achievement is that 98% of households received water and sewer connections from 1988 to 1997. However, water and sewer connections to households are not the foremost problem for a German municipality because such things are obligatory. To be more precise, problems with water and sewer connections appear, for instance in the Binsfeld, an area belonging to the city of Speyer, because very rich people enlarged their weekend homes into mansions without considering that the water and sewer infrastructure was not designed for it. In both cases people demanded that their more or less illegally built houses are connected to the water and sewer infrastructure of the municipality. In both cases we have an attempt to redistribute tax money in Porto Alegre in favor of the poor, and in Speyer in favor of the rich. Hence, we should be careful when introducing participation measures from different cultures as they might be used in the wrong way.

At first glance, the number of 40,000 participants seems impressive. Taking into account that Porto Alegre has about 1.4 million inhabitants, then that success has to be put into perspective. For example, the turnout rate lies below 3% of the population, and furthermore, a World Bank report concluded that in Brazil around 2.5% of the municipalities have adopted PB. The figure of 2.5% does not sound like a real success story. Moreover, it is apparent that once neighborhoods have had their demands fulfilled, they reduce their activity in PB as people are much more likely to become politically active if they are personally affected; something like an inverse NIMBY effect: I got it, so I stay at home (IGISH). Seemingly, Brazilians do not behave any differently to Germans with both being selectively utilitarian, only becoming politically active if really necessary or it is easy and promises success.

PB is a child of the socialist/communist Workers' Party of Brazil. This might serve as an explanation that low-income group representatives dominate community discussion processes. Some groups still are not included, especially young people and the very poor. Moreover, in Porto Alegre "clientele policy" still plays an important role. The most critical issue concerning democratic standards is the delegation of power from the people to PB delegates. When thousands of people come together in theaters, circuses or football stadiums to draw, or should we say deliberate, political decisions, it is necessary to delegate their decisions to delegates. In Brazilian PB the process of delegation seems to be very vague. Of course this kind of Soviet-style decision making does not meet

democratic standards because people other than party members or followers are excluded. The problem is that delegation and decision making is neither transparent nor open to all affected persons (Mororó 2014).

The most bizarre and obscure attempt to introduce a new and democratic way of decision making was the online voting system named "liquid democracy," and slightly pretentiously announced as "true democracy" (Schiener 2015). Decisions, in other words, the final votes or elections, could be altered frequently and permanently with the result that nothing was reliable any more. Moreover, people could transfer their vote to someone else without knowing to whom or how the vote will be used. In Germany the Pirates Party applied and promoted that system as a new approach to democracy (Palmer 2012). After the state and the federal elections of 2017, the party collapsed to below 0.5% share of the vote compared to 8.9% in Berlin in 2011 and is no longer represented in any state parliament, already being seen as a part of history, more or less.

The new ways of participative democracy exhibit certain shortcomings compared to classic democracy. Firstly, the one man, one vote principle is violated because specific groups (e.g., people with an individual political attitude such as the Left, migrants or the have-nots) have a privileged right to decide instead of the majority of society. Sometimes, decision making is necessarily limited to small groups of people because deliberation is not possible with a large audience as in citizens' juries and panels. In both cases the legitimacy of decision making is dubious, as the mode of decision making is not transparent and manipulation cannot be ruled out. Hence, only a fraction of the people are involved in that kind of participation and the results are questionable. Besides, the question has to be raised as to why in western Europe a fairly good working democratic system—a representative parliamentary system with more or less direct democratic elements—should be replaced or amended with participative elements being neither democratic nor working, even in the realm of "far, far away" (Shrek Wiki 2018).

Referenda are a useful and workable add-on to representative parliamentary democracy and gamification can also help to foster deliberative participation. Referenda work as a constant means to control political elites that are elected only every four or five years. Deliberative or participative democracy shows exactly the same shortcoming as representative parliamentary democracy. The actual decision making is delegated to small, selected groups, with the problem being even worse in the case

of participative democracy. Political outcomes such as social equality or the benefit of particular groups like migrants, are the overarching goal above political equality or democracy and thus democratic decision-making procedures are suspended and replaced by other opaque procedures. Participative democracy, based on deliberative and dialogue-oriented methodologies due to the small number of people involved, intentionally or not, necessarily favors specific groups in society. Decision making is handed over to whichever rather small group of the politically active minority is relevant to the decisions, for example, the 13.4% in the Mannheim democracy audit (Fig. 4.3) or specific political—mostly left-wing—segments of society. This runs the risk of substantially violating the interests of other groups or the majority of people. The examples of Trier, Rhineland-Palatinate, and many others show that people oppose the results of participative democratic decision making if it represents a manifest against their interest. As a result, citizens' participation is actually promoting the disenchantment with politics rather than reducing it. In the last days of the German Democratic Republic (GDR) in 1989 and 1990, the people demonstrated every Monday, particularly in Leipzig, while repetitively shouting the slogan "We are the people!" The fall of the GDR certainly had to do with the economic problems of the socialist command economy and the turmoil in the Soviet Union, but by shouting "We are the people!" the people expressed that the problems of the country could be attributed to the fact that decision making was exclusively limited to a small class of Communist Party leaders for more than 40 years.

Hence, participative democratic decision making by small groups has a problem with the legitimacy and workability of its results. Combining deliberative and dialogue-oriented measures with gamification elements such as the voting in casting shows, opens up the possibility to address the problems of participative democracy. Giving people the freedom of choice between different possibilities can prevent controversial decisions being made that result in enduring conflicts among different groups of society.

In the following section, we will introduce the development of participative budgeting in Germany. By virtue of gamification, this development underwent a metamorphosis from the socialist Porto Alegre model to a two-step procedure in a manner not unlike the gladiator fights in ancient Rome. The deliberation participants fight out a proposal just like the gladiators in the Circus Maximus and the audience finally decides

with a thumbs-up or thumbs-down gesture. This meets the needs of the majority of people not wanting to fight and get hurt in the political arena, but nevertheless who wish to be informed and monitor the game, and to interfere if things are not going the right way. The workability of democratic decision making is always a matter of checks and balances to "prevent the inherited characteristic of power to corruption" (loosely based on Lord Acton and decision making in *Animal Farm* (Kannan 2018)).

A Brief History of Participative Budgeting in Germany

There has been a recent movement towardsPB in some towns and cities in Germany.[1] Three rather distinct phases can be outlined.

Phase 1: The Porte Alegre initial fantasy. In the year 2000, a pilot approach was launched in 10 medium-sized Germany cities, introducing the idea of PB more or less according to the of Porto Alegre model (Bertelsmann Stiftung 2004). All PB approaches, including that of Porto Alegre rely on the personal attendance of participants. In contrast to Porto Alegre the influence on decision making of the PB was rather vague; positively worded it could be said to involve a very limited scope of decisions as well as a very small share of the municipal budget. The underlying idea behind the PB was that the budget would determine the most important settings of the municipal agenda. Therefore, PB seemed to be a silver bullet achieving a coproduction of politics, administration and the citizens of community life. However, the bullet did not hit the target at the first attempt. The moment that state and donation funding of the project ended, four of the six pilot cities immediately stopped the project. The reasons the municipality officials gave for leaving the project are significant:

- Only 20 people attended the PB informational town meetings. A poor ratio of a lot of effort to few results in the city of Monsheim at the Rhine.
- The success of the PB was short-lived. Before very long, only the usual suspects of professional activists and policy nerds etc., were participating in the city of Vlotho.

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[1] The website "buergerhaushalt.org/en" monitors PB activities in Germany.

- No money! "If there is no financial scope you should not ask citizens about wishes and demands because there are no opportunities to put them into practice" was reported from the city of Hamm.

Retrospectively, it looks like most of the PB 1.0 approaches focused mainly on the delivery of information. Politicians and civil servants concerned with budget matters took the chance to comment on and interpret the complicated matters of a public budget and the hardship of the civil servant's daily work, particularly in the financial department, to the public. Supposedly, people did not want to be given lessons on the municipal budget in their leisure time. Moreover, the influence of the citizens on the budget was either very unclear or non-existent. This failure of the first attempt to introduce PB in Germany can be explained by the violation of all the elements which make up gamification as defined in our frame of reference in Chapter 2, thus making it unattractive to the people: Absolutely no guarantee regarding the influence on actual decision making or the result of the "game," consequently unclear rules and no transparency in the decision-making process, and finally, participative measures relying on personal attendance remain extremely unpopular. The cost-benefit ratio of political effectiveness and economic efficiency appeared to be unfavorable (see Fig. 4.1). The effort involved in the administration preparing a lot of information for a mere 10 or 20 citizens, without an observable effect on political decision making regarding the budget could hardly be seen as a success.

The following chart indicates that something changed starting around the year 2010 and 2013 (Fig. 5.1).

From 2008 to 2011, all municipalities which had recently introduced PB did not continue with it in the following year, and even if some did, a correspondingly higher number of municipalities quit that the same year. However, only about 10 municipalities continued their PB for some time. Since 2011, the number of municipalities continuing their PB has risen from 10 in 2011 to 26 in 2013. Although the number of municipalities (up to 70 in 2012–2013) which stopped their PB has risen at the same time due to a higher number of municipalities which introduced or trialled PB, there has been a small but visible trend of more municipalities applying PB as a regular feature of city planning. Nevertheless, compared with the approximately 2000 cities in Germany, 26 is still a rather small number. On the other hand, no other measure—except citizens' surveys (Brettschneider 2013)—has been used by German municipalities for the purpose of consultation of citizens' opinions over a longer period of time.
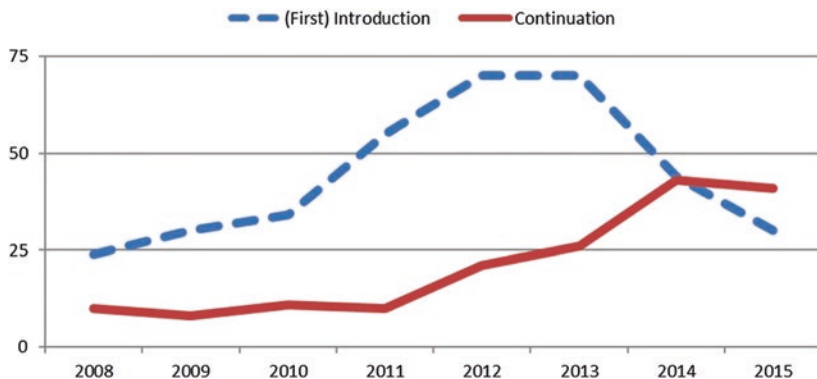
Fig. 5.1 Number of municipalities introducing and continuing PB in Germany, 2008–2015, absolute terms (see the Status Report on Participatory Budgeting in Germany, Bürgerhaushalt 2017; see http://www.buergerhaushalt.org/en/status-berichte. The website monitors the development of BP in Germany permanently)

Phase 2: The Web 2.0 fallacy. The Federal Agency for Civic Education together with some other civil society organization has monitored the development of PB in Germany since 2007 by means of the website bürgerhaushalt.org. Prior to 2011, only about 10 municipalities had applied PB over a time period of more than two years. During the same period, roughly 15 to 20 municipalities stopped carrying out PB. Thus, the number of PBs that were continued successfully for more than two or three years was very small. As in the case of the pilot project (Phase 1) the small number of participating citizens can be considered to be the major cause of the very limited success of PB in Germany (Masser et al. 2013).

At first sight, the reason for the turnaround could be attributed to Web 2.0. This is, on the surface of it, a lucid explanation. More and more municipalities used Web 2.0 applications to run their PB. On the other hand, a thorough examination of PB over the course of the years 2006–2011 showed that the Internet could not be the main reason for the upswing of PB in Germany. On the basis of five particular examples it can be demonstrated how different approaches to PB yield different results. The PB of the borough Marzahn-Hellersdorf in the eastern part of Berlin, still governed by Die Linke—the new socialist and former communist party of the GDR—corresponds to the concept of Porto Alegre to a large degree and is mainly based on personal attendance.

In the years 2006 and 2011, 50 and 64 people respectively, attended the PB meetings. In the year 2011, the opportunity of participating online was enabled bringing in 117 additional participants. Even if the number of people taking part in participative procedures based on personal attendance is almost always very small with a share of less than 0.03% of the electorate, the popularity of the PB of Marzahn-Hellersdorf is still by far the lowest. On the other hand, the limited access to participation might be intentional.

In terms of participation, the PB of Hamburg in the year 2009 appears to be the second worst as only 0.04% of the electorate of the city-state took part. In sharp contrast to the PB of Marzahn-Hellersdorf, the Hamburg PB was performed totally online and was open to everyone. A very sophisticated piece of software was developed and applied. Every participant could influence the budget of all administrative departments and political bodies. It was advised to immediately display every increase or reduction in a specific budget so that each participant could check what influence their particular decisions had on the budget of the whole city, whether they led to savings or to more debt. According to the original idea to include citizens in the budget preparation in order to empower them, the Hamburg PB theoretically seemed to be perfect, yet the participation rate of citizens was a disaster. The devil is in the detail. Deciding on the budget of the specific departments—even of a small municipality of about 50,000 inhabitants—requires an intensive study of a budget report of at least 300 pages, something almost impossible to understand for non-experts. Even though the online PB delivered summary information and, via links, detailed budget information on every department and political body, how should a person decide, for instance, about the budget of the court of auditors and the constitutional court? In conclusion, the Hamburg approach to PB appeared to be much too complicated and demanding. A reasonable participation requires many days of intensive work on the states' budget. So, the citizens clearly ask themselves the question "Why spend leisure time on something like that?" Simply transferring something (e.g., the Porto Alegre PB to the world of Web 2.0) does not appear to be sufficient to make it a success. On the contrary, the Hamburg PB is an example that Web 2.0 appears to be an opportunity to make tricky things even more complicated and thus PB remained unsuccessful.

The PB of Freiburg im Breisgau (2009–2010) and Potsdam (2011) used a mixed approach of face-to-face discussions in town meetings,

online portals, and written surveys. It is no surprise that the participation rates of the face-to-face measures involving 0.13% of the electorate in Freiburg and 0.16% in Potsdam, or roughly 200 people, were very poor compared to the other measures. With the usage of online portals, 1700 and 1900 people participated, which is 1.2 and 1.4% of the electorate respectively, and this rate appears to be almost ten times higher compared to face-to-face-approaches. Still, obviously the opportunity to take part online was not the solution to the problem of a poor participation rate, and the problem of the social bias of participation still remained unsolved. Moreover, it came as a big surprise that it wasn't the online portals which provided the largest parts of the participants, but the written surveys based upon representative sampling. In Freiburg more than 2500 people, or 1.7% of the electorate, responded to the invitation to take part in the written survey and in Potsdam it was almost 3500 or 2.8% of the electorate. Hence, the opportunity to participate online can be assumed to be helpful in increasing the number of participants, but it is not the decisive factor. PBs like in Trier, exclusively using the Internet achieved a participation rate of nearly 3% of the electorate, or 2322 people in 2011. While that is undoubtedly a significant increase in participation compared to the older Porto Alegre approaches using only face-to-face methods, it is not close to being a quantum leap or a reinvention of democracy. Moreover, totally web-based PB as in Trier or Cologne reached no more than a 1–3% participation rate of the electorate with significant declines over time when the PB was restricted to only saving suggestions. In Cologne the number of participants had declined as follows: 2008–2009: 1.7% of the electorate, 2010–2011: 1.5%, 2012: 1%, 2013–2014: 0.5%, 2015: 0.6%, and 2016: 0.9%. In the time between 2013 and 2015, the proposals to the PB were restricted to saving suggestions. In Trier the restriction to saving suggestions in 2011 had almost the same effect and proposals, suggestions, comments and votes dropped by about 40% to 50% compared to 2009 and 2010.

The comparatively low cost of online PB might have triggered many municipalities to try PB. Freiburg is the only city which revealed the costs of the different approaches to PB, namely face-to-face methods, online, and a written survey. Due to state funding of PB, the municipality was obliged to publish the figures. The cost per participant of the face-to-face city hall conference was €1.484 (for 206 people), for the online portal €110 (for 2048 persons) and €58 (for 2575 persons) for the representative written survey. Thus, the cost-effectiveness ratio clearly

speaks for the written survey. The Porto Alegre approach has a rather poor ratio of participants and costs, although on the other hand, costs might not be the first and foremost argument if you want to make a revolution involving the redistribution of power from the majority to a small elite group. Online approaches show a rather good cost-effectiveness ratio, being only twice as expensive as written surveys, rather than 30 times.

If we ask ourselves why only online PB approaches flourished compared to just written surveys, two reasons can be found. First, online approaches could be enriched with deliberative features like discussions and blogs, something that is impossible to do in the old printed analogue word. Second, online was much more fashionable. On the other hand, as with many other interactive methods on the Internet (e.g., customer ratings and Facebook) the question arises of possible manipulation of the results of these measures. The PB of the city of Jena in the year 2009 is a striking example of how different approaches arrive at completely different results (Masser et al. 2013). The municipality questioned citizens about the most important investment project for the budget period of 2009–2012. A representative written survey came to the conclusion that the restructuring of a central public swimming pool was the most important issue followed by social housing policies, and then the renovation of schools and children's playgrounds. The restructuring of the local football stadium only ranked in ninth place, more than 3.5 times less important than the swimming pool according to the rating scale used. In comparison, the online PB generated a completely different result. Here the restructuring of the local football stadium was by far the most important issue and came in about 2.5 times more important than the swimming pool. Apparently, the supporters of the local football club had mobilized a lot of people or had somehow managed to dominate the field. Next to the written survey and the online PB, forms which anyone could take and fill out were openly displayed in official buildings. Here the most important issue was a small artificial turf football pitch in a suburb named Isserstedt. Isserstedt defeated the central football stadium project by more than 10 times. Even though measures like registration—mostly not checked for authenticity—or Bot Blockers are used in online PB, people have are sensitive to the idea that the decision-making processes are actually fraudulent or that fraud is possible or even has to be suspected. People do not appear to trust purely online procedures.

Stephan Eisel, a critic of the PB approach of Bonn (Eisel 2018), the former German capital, condemns the online decision-making procedures in particular. He figured out that a highly active minority of people were dominating the deliberation of the PB: The discussion about shutting down the opera/theater was dominated by two people who were responsible for more than 33% of the 205 contributions to the discussion. As in the case of the PB of Jena, the online approach seems to be vulnerable to manipulation and the domination of small groups. Moreover, very active people in Internet deliberation are often psychologically remarkable characters—so-called trolls. Basically, as in ordinary face-to-face deliberation, this kind of person combined with the tendency toward the development of political camps impedes a higher level of participation in deliberative measures. Furthermore, the critic (Eisel 2011) argues that user numbers are overstated and votes are manipulated. Using Web 2.0 alone is apparently not sufficient to make PB flourish. According to our criteria for gamification, successful decision making cannot solely be based on online measures because clear, just, and simple rules together with transparency are required in order to for people to accept decisions made.

Phase 3: Gamification— Success but Hard Work. The PB of the city of Potsdam—the capitol of the federal State of Brandenburg—has seen the most impressive increase in user rates by far of all German PB approaches. Starting in 2008 with under 1% of the electorate, which correspond to approximately 1000 participants, the number of participants increased to 10,000 in 2015–2016, or more than 8% of the electorate (Fig. 5.2).

Participation in the deliberative part of the Potsdam PB, and the bringing in of new proposals, their discussion and prioritizing, increased significantly from 2008 to 2015/2016, a sevenfold rise from fewer than 250 people to more than 1500. What stands out much more and actually skyrocketed is the participation in the final voting regarding the selected proposals in the deliberative phase, with an increase from fewer than 1000 people to nearly 8500 people—a greater than ninefold increase). More than 60% of the participation came from the written survey, about 34% from the online portal, and approximately 4.5% from face-to-face town meetings (Fig. 5.3).

The participation rate of the town meetings increased during the period of 2010–2015 to around 30% for the written survey, around
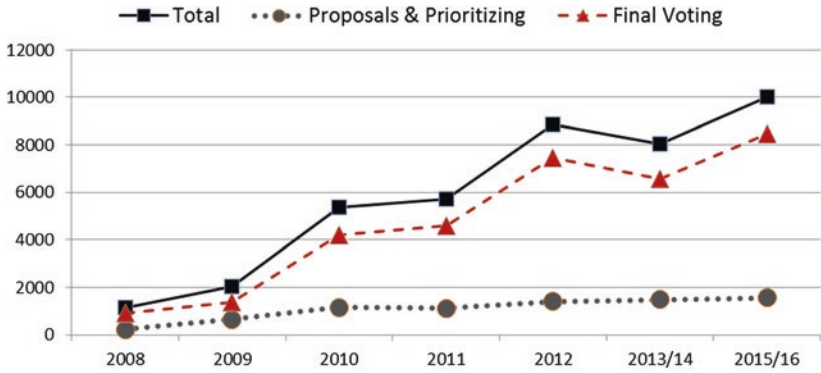
Fig. 5.2 Development of the participation of PB in Potsdam, different opportunities to take part. 2008–2015/2016, absolute figures (Bürgerbeteiligung Potsdam 2017)
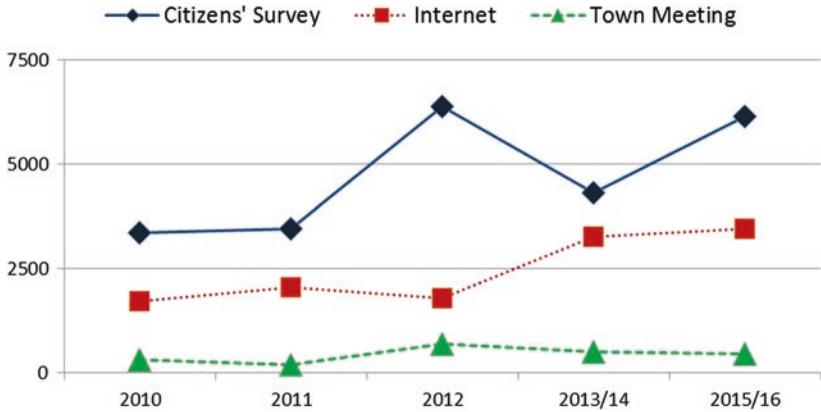
Fig. 5.3 Development of the participation of the PB of Potsdam, different methods/channels of participation. 2010–2015/2016, absolute figures (Bürgerbeteiligung Potsdam 2017)

45% for the online portal, and around 50%. Preliminary information about the PB for the budget of 2018–2019 indicates that participation has again gone up to 14,000 people or more than 11% of the electorate (Landeshauptstadt Potsdam 2017). The reasons for this huge success are

manifold. Firstly, there is a kind of a guarantee of satisfaction because the municipality is endeavoring to implement the top 20 proposals. Should insurmountable financial or legal obstacles inhibit this, it will be explained to the people and if there seems to be a chance of achieving it in the future, the project will be postponed. Secondly, the process is transparent, fair, and just. Everyone can hand in proposals, comment on other proposals and take part in the prioritizing and final voting. However, as the figures clearly show, as in ancient Rome the majority of people in Potsdam still prefer the role of the audience, watching the political arena and deciding in the end to give either a thumbs-up or thumbs-down gesture. The high number of participants in Potsdam ensure the acceptance of the PB procedure and consequently the legitimacy of the decision-making process. Thirdly, the municipality pursues the PB actively and with the deployment of staff and money, a clear signal to the citizens is given, demonstrating the sincerity of the PB and moving away from symbolic politics. Hence, the Potsdam PB follows the rules of gamification to a very high extent if not quite perfectly. In return, the Potsdam PB constantly has the highest participation rates of all participation measures in Germany, elections and referenda excepted.

Letting the citizens make proposals and then choose the most popular ones with the help of gamification methods is the essence of PB that follows the Potsdam model. Citizens can suggest all kinds of projects and ideas. Every year, or since 2012 every two years due to a biannual budget period, 20 proposals are selected with a guarantee of implementation. The concept is reminiscent of popular TV shows like *American Idol*:

1. As a first step, proposals can be discussed and rated (for example by a "like-scale" where 1 = very good and 5 = very poor). The analysis produces a given amount of the highest rated proposals, usually 40–100.
2. The second step is a review of these proposals by the municipal administration and sometimes also by the parliamentary groups which have shown interest in PB.
3. The proposals which survive this reviewing process during the second step then go through another selection process: The shortlist of proposals is rated a third time via the Internet, accompanied with a written survey, allowing a vote from each citizen.

4. Finally, the city or town councils have to decide about the remaining 20 proposals. If a PB proposal is rejected, the reasons are explained to the PB participants.

You can see clearly how similar the procedure is to the Customer Connection program of the company SAP introduced earlier in Chapter 2.

According to the monitoring of German PB on "buergerhaushalt.org" in 2016, only 25 PBs existed that were conducted over a longer period of time, in 1.2% of German cities. Within 13 municipalities of these 25 (52%) the prolonged PBs more or less followed the gamification model of Potsdam. Eight municipalities (32%) used mixed approaches with gamification elements without a clear commitment to the realization of the results, which were subject to change due the competence of the city or town council. Two (8%) of the prolonged PBs used classic approaches in accordance with the Porto Alegre model, and for the remaining two no information was available.

Here we have two striking results: First, even if many municipalities introduce or attempt PB there is only a very small number which keep the flag flying. When the going gets tough, mostly it is only those using a gamification approach that continue. What are the reasons? A possible explanation is that as in referenda, gamification inevitably requires a redistribution of power from political bodies like city councils and political parties to the people—at least to a certain extent. Direct democracy and gamification are much more radical approaches than a Porto Alegre-style PB. There are checks and balances empowering the people to control the political arena, preventing the mismatch of decision making between politics and the people from growing too big. On the other hand, the members of town and city councils at the municipal level spend a lot of their leisure time doing voluntary work for the community. By removing the important decisions from them in particular, takes away one of the key motivators for doing the job if financial advantages through making a career in the political system is not the crucial factor. Furthermore gamification, if seriously and successfully carried out as in Potsdam, requires a lot of effort and care. However, it introduces new inspiring challenges and opportunities which balance or outweigh the loss of immediate decision-making power. Defining the rules of the game is a much more challenging task than the mere decision making. The game's rules and the frame of reference have to be developed and shaped in such a manner that the possible results are in line with the political will

of the city council, for example. Different possible and preferable variants or proposals have to be developed, maybe by experts or by the players themselves, and finally there has to be a process to determine the best or most-appreciated solution—sometimes the solution with the lowest resistance.

A good example of the negative effects of workable and non-workable rules is the online participation portal of the government of Baden-Württemberg (Beteiligungsportal Baden-Württemberg). The portal is used for the publication of intended initiatives and legislation. Here, initiatives and laws are explained and citizens can comment and discuss them. An evaluation of the portal (Masser et al. 2015) showed that the activity of citizens with respect to this portal is rather manageable. Fifty comments are quite a lot but mostly the number of comments is significantly lower. Initially, the question was raised of whether likes and dislikes—literally a thumbs-up and thumbs-down button—should be made possible. The thumbs-up or thumbs-down option might hinder discourse and therefore triggers the false presumption that there is the possibility to vote and decide about the governments initiatives. Finally, despite these concerns, it was decided to generally allow the thumbs-up or thumbs-down approach. The data about the activity confirmed the findings relating to PB: Most people do not want to participate in the discourse but would like to give their opinion on the idea or proposal that they prefer. The number of votes surpassed the number of comments by more than 200 times on occasion! Two initiatives, both within the jurisdiction of the Ministry of the Environment attracted the largest attention. First, the establishment of a new national park in the northern part of the Black Forest. Essentially, only the communities in a rather small area were affected because nearly all economic activity was supposed to be prohibited in the new national park. However, the park became a political issue discussed all over the state. Hence, 461 citizens commented on and discussed the issue and 64,730 valuations using the thumbs-up or thumbs-down approach were made. Approximately 75% of the total activity—both comments and votes—on the portal related to the topic of the national park. Secondly, in the following year, a new game law was introduced. The Ministry of Environment was presumably worried about a high level of activity of the hunting association which opposed large parts of the new legislation and invited their members to participate in the commenting and discussing of the legislation in order to stop or substantially modify it. However, the ministry was especially

concerned about the result of the thumbs-up or thumbs-down voting as a result of the mobilization of the hunting association. Consequently, it was decided to turn off the button and only comments without the possibility of a valuation were allowed. The result was the highest number of written text comments ever: 2419 or 96% of all comments in the year 2014. The hindrance of votes did not evoke a more deliberate discourse with more opinions and a greater exchange of arguments. Removing the possibility of just registering a "like" or "dislike" evoked a vast number of comments. People wished to express their approval of prior comments together with hundreds of other users who had either posted "I agree" or had just copied the comment they wanted to support. The consequence was that the small number of staff in the ministry was totally overstretched in dealing with all the 2419 comments and even more with analyzing and evaluating the data. The switching off of the "like" or "dislike" button obviously had not worked and was not done thereafter. The simple lesson learned here is that there are two very different ways to participate. These are deliberation, which attracts very active and political interested persons, and voting, which attracts the larger part of the electorate not wanting to spend a lot of much time on participation. The two different ways to participate have to be treated separately and cannot be mixed. Their amalgamation was just not workable.

Gamification in the Planning of Big Infrastructure Projects: Workability Through Visualization and Systemic Consensus

In Ludwigshafen on the Rhine, an elevated highway needs a complete renovation. The highway was built between 1970 and 1980. It is a national road which begins as a freeway, goes through the centre of the city and crosses the Rhine, thus having an important local and trans-regional function for commuters, freight transport, and local citizens. It links the right and left banks of the Rhine within the metropolitan area of Rhine-Neckar and is an important feeder road to BASF, the worlds' greatest chemical production site (Fig. 5.4).

The building project will have a major impact on the city and the region. The construction period is estimated at approximately 10 years, and the costs will come to around €300 million. The city decided to involve the population at an early stage and four alternative planning

Fig. 5.4 Northern elevated highway in Ludwigshafen at the Rhine, joystick to drive through the four virtual reality scenarios depicting the future road

variants were developed. According to the chief coordinator of planners this was quite unusual. In case of such a project the planners usually familiarized themselves with the general conditions, for instance, the maximum capacity of cars per hour the road has to cope with, environmental emissions, noise protection, and other standards, and last but not least the financial scope. The second step was the assessment of different variants. According to the general conditions the preferred option was chosen, readied for decision, and then discussed with the political decision makers. Normally, only minor modifications after the consultation of politicians and administrators were required. Finally, the completed plan was presented to the public. Citizens' participation was little more than an advertisement for the finished product. On the basis of the complex, expensive and time-consuming planning processes it seemed to be impossible to undertake the planning in a different way. Today, with the help of IT-supported processes it is possible to develop more than one possible alternative simultaneously without running out of time and money. Consequently, it is in fact possible to integrate the citizens into the ongoing planning process, changing the role of the planner significantly. The main aim is no longer to find the preferred option, but to show alternatives along with their pros and cons according to the most important requirements. As a result, political decision makers can join with the citizens and be placed in a position where it is possible make a well-founded decision.

The four possible options for the elevated highway in Ludwigshafen varied from a complete re-establishment of the elevated road, two half-elevated versions, and a completely new ordinary road at ground level. During town hall meetings, location inspections, and on a purpose-built online portal the variants were presented and the specifications explained:

1. How long will the construction period last (in the best case variant eight years, in the worst case twelve)?
2. How much will it cost (cheapest alternative: €270 million, most expensive: €330 million)?
3. How high will the noise and exhaust emissions be?
4. What possibilities for the future development of the city are associated with each variant?

The most outstanding feature of the approach were virtual 3D-videos for all four scenarios, presented at town hall meetings and on the web. Thus, every citizen was able drive through virtual new roads using a joystick. After balancing the pros and cons, everyone could name his or her preference for one of the alternatives. Within the online consultation platform citizens could make comments on the variants and discuss them with each other. Finally, participants could vote for one of the four options. However, this was not a crucial vote on the scenarios in order to figure out the winner with the most votes. Participants had to rate the four scenarios on four specific characteristics, namely construction period, costs, emissions, and development of the city. In most respects such as costs, possibilities for city development, and so on about three out of four participants opted for the new road at ground level. In principle, the city council bears the responsibility for the decision. However, it seems nearly impossible to decide against the clear intention of a majority of citizens. More than 10,000 people took part in the town hall meetings and the online consultation in particular. There is still a group of citizens preferring the re-establishment of an elevated highway, and if traffic flow and parking space are the main goals then this may be a good decision instead of the ground level road. However, as in many other comparable cases in Ludwigshafen, it is very unlikely that there will be an organized and massive resistance against the preferred option. Citizens' initiatives of only a few people will stand no chance against the democratic will of more than 10,000 people or approximately 10% of the electorate. Together with the PB of Potsdam these are the two outstanding success stories concerning citizens' participation as measured by the number of participants. Both are remarkably good results.

The example of the northern elevated highway in Ludwigshafen points out that in case of potentially conflicting goals, an early stage involvement of only a few citizens is insufficient. Moreover, it is important to ensure a broad involvement of a rather large number of relevant

citizens and this was achieved through a gamification approach in the case of Ludwigshafen. The case indicates that a simple participation method and a procedure with ludic elements and a clear outcome are very helpful in reaching the overall goal. Additionally, visualization such as 3D animation helps to translate complicated planning to laypeople.

In the Lake Constance region (the southwest border area close to Switzerland and Austria) two national roads, the B30 and the B31 need to be extended to highways due to permanent traffic jams. Despite long-term environmentalist resistance against these projects, it was recognized that permanent traffic jams generate more damaging effects to the environment in comparison to an extension of the roads. In addition to environmentalist concerns, there are more obstacles, namely the opposition of interests between the improvement of the traffic situation on the one hand and the burdens for residents especially in terms of noise and exhaust emissions on the other hand. The situation regarding the B31 brings forth a particular problem: The towns and the waterfront opposed a routing of the new highway through their area because it would ruin the tourism which had made them become rich. Representatives of the towns and villages slightly further away lost their temper because the highway with all concomitant disadvantages should go through their territory, with only the lakeside inhabitants enjoying the benefits. In both cases the planners commissioned citizens' surveys. In the case of the B30 (Regierungspräsidium Tübingen 2016) questions were asked like "Do you think that something has to change about the traffic situation/ personal extent of burden?" The level of interest in the subject was also queried and several assessments of the three possible variants of route were made on the bases of an assessment of noise and pollution, desired start of construction, flow of traffic, cost, protection, and biodiversity conservation.

Seemingly the aim of the citizens' surveys was to figure out which planning options would evoke the greatest resistance. Very much resembling the systemic consensus principle: "The basic idea of the systemic consensus principle is to approach as close as possible to the consensus by measuring the level of resistance of each group member for each proposal. The decision will be the proposal with the least total resistance, the so-called group resistance" (Systemic Consensus Principle 2012). The idea of the systemic consensus principle could be a very helpful principle in developing rules for games used for public decision making. In the case of the B30 an effective influence on the decision making of the administration

was explicitly denied. Apparently, the citizens' surveys only served to assess the potential of resistance against the different planning solutions and it was by no means intended to give them a voice. On the other hand, this had been clearly communicated, the commissioned professor to carry out the citizens' surveys announced for example within an information event for citizens on 3 May 2016 that the results about the criteria for the assessment of the route options will be a major part of his presentation (Slide 29, line item 3, Regierungspräsidium Tübingen 2016). On exactly the same slide—even highlighted—he stated that the assessment of the route options by the citizens was not the aim of the survey! According to the citizens' surveys, the aspect of noise and pollution reduction appeared to be most important followed by the start of construction as soon as possible and a sound flow of traffic. All three of these aspects received over 80% positive votes and under than 10% negative votes. Nature protection and biodiversity conservation only ranked in seventh place of nine items according to importance with 41% positive votes vs. 34% negative votes. Costs appeared to be least important with 30% positive vs. 41% negative votes. Taking into consideration the major goal of the current Green Party-led government of Baden-Württemberg, namely to foster nature protection and biodiversity conservation, the monitoring of the future development of the B30 and B31 will be most interesting.

Today, all kinds of planning software is available and it is no longer only for experts. Regardless of whether one wants to plan a new house or garden, with the help of 3D simulation, everything can be depicted and be set out in a game scenario, for example, how will the garden will look in ten years, in spring, summer, autumn, and winter? With the help of appropriate software, it should be possible to integrate citizens into the planning of large-scale projects using multiplayer online games. The task of planning will be to figure out the right setting of the game, for example to define possible road courses, locations for plants, minimum or expected capacity and so on. Therefore, gamification changes how information should be presented. The classical form of long written texts, extensive tables and figures, and construction drawings are not appropriate to present understandable information to citizens. For example, administrative information has to be translated by digital visualization and compression into pictures/videos and significant indicators. This transformed information is the basis for the development of games.

One of the foremost favorable features of the winning scenario in Ludwigshafen is the enhancement of city development opportunities, in

particular the creation of free space for new buildings or green corridors. On the other hand, in the 3D animation there are only vague cubes and potential solutions. What the future will bring is still uncertain. Many cases of city development planning in the past, such as in the 1960s and 1970s did not provide the desired results. Instead of modern and vital neighbourhoods, social flashpoints developed. To figure out the potential advantages and disadvantages of different approaches of the city's future development, gamification might be useful. Browser games like "Forge of Empires" already employ an interesting plot. The course and outputs of the games and challenges could deliver valuable information about mistakes to be avoided and which factors should be encouraged.

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Lessons Learned: An Author's Digest

Abstract Playing games is popular in all times and cultures. It comes as no surprise that gamification can help to cure the most severe problems facing citizens' participation: The non-participation of the citizens. Deliberation seeks the one and only best decision, while gamification strives to pick a decision out of at least two alternatives and is anything but a trivial concept. The trick is to define the goal and the rules of the game in such a manner that it is attractive to play. Additionally, visualization and 3D animation are helpful tools. Although very challenging for the developer, it is also thrilling and joyful because the result is the subject of gamification in itself: Will the game work? Which result will it bring?

Keywords Extrinsic motivation vs. Intrinsic motivation · Crisis Gambling · Voter turnout · Workability · Success

Playing (Games): An Enduring Success Story

Playing and gambling are inevitable means for learning and thus for the evolutionary fitness of individuals and species as well as political systems. What are the factors for success? What makes playing and games so unique? The answer is that they addresses the complete scope of extrinsic as well as intrinsic human motivation:

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1. Playing (games) gives joy. For instance, playing a musical instrument or experimenting with any kind of object like a ball can occupy humans and cause them to completely forget about the outer world. Here we have pure intrinsic motivation due to being happy about playing or being proud of the game's success combined with the experience of progress and achievement.

2. All kinds of human skills and capabilities developed by joyful practicing have the potential of intensified joy with the introduction of competition. Playing football with schoolmates in the afternoon is fun. Competing against another team means a higher level of excitement if you win. Intrinsic motivation is enlarged by being seen and recognized by the opponent(s) and possibly spectators. Intrinsic together with extrinsic motivation play a decisive role and even if one is absolutely not interested in football, for example, betting on a game makes even a very dull thing thrilling.

3. Being extraordinarily talented and successful in some games offers the potential to become rich and famous. Being admired by a large audience is obviously purely extrinsically driven. Football players like CR7 and team managers like José Mourinho, for example, need the audience's admiration and/or hate for boosting their motivation in order to produce extraordinary performances.

Consequently, it seems promising to use gamification in non-game contexts. Theoretical reasoning as well as practical examples indicate that in private business in particular, it is preeminently useful in branches or departments where innovation and creativeness is required, such as in software or video game development or R&D. Additionally, gamification can be a very helpful tool in order to integrate the customers into product development or quality management. With the help of game procedures, the assessment of the market success of new products or product modifications is possible. Hence, gamification supports the decision making and product development of companies operating in competitive markets by reducing uncertainty about the success of their products. In the same manner gamification is able to support decision making in the public sector, especially if citizens get involved, otherwise it is usually restricted to elected bodies and political elites. On the other hand, gamification does not seem suitable in fields where security and safety are the most important criteria. In the case of operation of nuclear power or chemical plants, for example, it does not seem desirable that the staff experiment and play games.

In the public sector we have a similar situation; see for instance the research project "participation procedures in innovation processes" (partinno 2018). Sectors where security and/or the rule of law form the key aspects are not really suitable for gamification. Then again, city and infrastructure planning, together with citizens' participation, is highly reasonable. It comes as no surprise that in Germany we find the most promising approaches to gamification in the public sector, and in particular in the previously mentioned fields.

Therefore, let's end this section with a short how-to of gamification to help when starting to use this approach in the public as well as the private sector: If you really want to think about gamification, start playing games first. If you do not really like playing games or if you do not have the time to do so, watch and observe other people or just your children playing games. For instance, stand behind your son or your daughter while they are playing a game and ask them questions like:

- Why are you playing the game?
- What is your motivation to continue playing the game?
- Or if they skip a particular part or game, what were the reasons for skipping the game?

Moreover, start changing your own attitude by:

- Exploring one new gamified app every week: Do not just superficially skim over it but force yourself to use the app over a longer and regular period; look at apps that friends/colleagues/family/newspapers/websites talk about.
- Play games: Find reasons to play games; play with friends/family etc.; analyze why you like/dislike the game or why you get addicted to a certain game; analyze game mechanics, fun motivators, reward balance etc.
- Try approaching boring situations with gamification: If you stand in line in the supermarket or you are stuck in a traffic jam while going to work in the morning, gamify the situation by counting the number of men wearing black jeans or a blue sweater, for example, and try to beat your high score the next time you are in the same situation.

We live in a creative society where it is crucial to come up with new ideas and business opportunities of how to better serve a customer in the

private sector, or the community in the public sector. In this regard, a playful approach can open mindsets, create happiness and joy, and can cause the involved parties to go the extra mile.

Workability: What Makes a Game Successful?

However, first we must identify the factors and characteristics making gamification approaches workable. Historical considerations about democracy as well as recent research insights about the video game industry helped us to work out the three most important characteristics corresponding to the three sources of motivation to play games explained previously:

1. Joy: Different levels—a successful game should not be too complicated to learn for beginners and at the same time should offer the possibility to become the best player in the world. From youth/novice to amateur, professional, and master, every level of skill must be possible without discouraging inferior performers too much. Inferior performers always have the opportunity to become critics or journalists as long as they understand the basics of the game.

2. Competition: Simple, clear, and just rules which allow—with the help of metrical measurement like points, goals, height, length and so on or judges—the undoubted determination of the winners, ranks, achievements and records. "The fastest man in the world" or the 100 meter Olympic sprint race winner has to be identified unequivocally as well as the winners of the football World Cup, and the winner of the "green grass league."

3. Admiration and participation: Aspects 1 and 2 ensure that at least one player and an audience sphere are given differentiated, distinct roles. The professionals and masters play in the broadcast arenas, for instance, the top opera singers like Pavarotti, Domingo and Carreras. Still, the audience understands the game and is able and willing to be involved in the final decision making, by supporting the team in the stadium, for example, or by deciding thumbs-up or thumbs-down regarding the final result of a gladiator fight or who should become the next President of the USA.

Moreover, workability is a necessary but not a sufficient precondition for the success of a game. However, gamification has the potential

to increase the motivation of the players (staff as well as citizens) and subsequently enhance the market success of companies as well as the legitimation and acceptance of political decision making through high participation rates. Achieving this objective needs further characteristics that a game must have in order to be successful:

1. Joy/fun for all players no matter how talented or skilled, and which role they want to have. A successful game inevitably delivers the freedom of choice to be either an actor or a spectator, and is explicitly not like *The Hunger Games* (The Hunger Games Wiki 2018). In the case of political decision making it is the freedom of choice to be politically active or to simply stay informed.
2. Competition based on clear and just rules: This needs transparency together with the openness of the game's result. The rules and results have to be unambiguous and safe from manipulation and fraud. This guarantees that players of both teams, as well as the audience, are able to accept or at least tolerate the result. Additionally, the opportunity of a rematch (e.g., in the second half of the season or the next election) helps in the acceptance of a defeat.

Admiration, participation and challenge: Only the combination of aspects 1 and 2 enable the fitness of a game. Excitement and/or performances on all levels—amateur or professional—are ingredients for successful games.

Gamification is nothing new. According to Charles Darwin and his theory of evolution, the development of all life on Earth is based on spitting out endlessly numerous variations all competing for success. The number of attempts necessarily exceeds the numbers of survivors, because only the fittest survive. Gamification is the way to figure out the successful attempts. The mode to determine winners and losers—Darwin's survival of the fittest—is non-negotiable, hence it is equal and fair for all players. The invention of democracy in ancient Greece was the beginning of citizens' participation in political decision making. The people of Athens invented two extraordinary new procedures for decision making, both still a horror scenario to political elites today: First, majority voting and referenda, limiting and controlling the power of elites significantly, and second, the random lottery of nearly all public offices of importance, limiting and controlling solely political careers. It is a long way from ancient Athens to now. What have we achieved or not achieved since then?

CITIZENS' PARTICIPATION AS THE REINVENTION OF DEMOCRACY: "WHO IS GOING TO RESCUE THE RESCUER?"

In Germany, citizens' participation is often used for decision making in public planning such as decisions on the priorities of municipal infrastructure projects like the restructuring of streets and squares, sports arenas, and public pools as well as larger infrastructure projects like flood protection, national and regional electricity grids, or the enlargement of highways. Two interwoven reasons provide the main justification of the need for citizens' participation: First, an enduring crisis of representative democracy with diminishing legitimacy of the elected bodies, and second, an increase in resistance against and non-acceptance of decisions relating to projects.

At first glance, the need for citizen participation sounds reasonable. The reality of citizens' participation provides us with a different, if not contrary image: Even in the famous participatory budget (PB) of Porto Alegre, under 3% of the people took part. Moreover, it does not seem sustainable as facts show, that once a neighborhood has got what it wanted, people stop their engagement. Most German PB shows a problem of having only a very small numbers of participants, mostly not even 2% of the electorate, and subsequently the approach cannot be sustained over the following two or three years, if at all. Moreover, not only do methods and procedures relying on big groups like PB or town hall meetings suffer from citizen absenteeism. Even collecting a small group of people for a citizens' jury of about 20 people is hard work. Getting a commitment for participation usually requires asking more than 25, 50 or even more people. In the course of conversations in-person, which are never quoted in reports for obvious reasons, it is reported that participants of focus groups were recruited from staff relatives or from the street, simply being happy about a free buffet. There are virtually no reported failed participation procedures, probably due to the fact that project proposals always promise an effective participation procedure? Therefore the question arises of how to explain the plentiful number of successful participation approaches, instruments, and methods standing in contrast to the small number of real applications. Moreover, we have to take into account people's unwillingness to take part in all of these participation procedures.

Just as a quick reminder from the introduction: The Greek term *demos* means "great number," or rather, "majority." Additionally, the selection

of executive personnel was done in a random fashion by lottery. The practice of citizens' participation in Germany violates the preceding two principles fundamentally. So far, empirical evidence from citizens' surveys does not indicate that this traditional kind of punctual citizens' participation helps to counter disenchantment with politics.

The problem of the rejectionist attitude of the majority of ordinary people against citizens' participation results in serious problems, especially with regard to the legitimation and acceptance of the results, for instance, of focus groups, citizens' juries and so on. In the case of open access forums and events, the usual suspects of local politics show up and quickly one is almost on one's own. However, even if other participation suspects appear or participants are recruited randomly, self-selection mechanisms lead to an ever-identical composition of the participants. In Germany, the typical citizen participant is male, over 45, and with a higher education and income significantly above the average but not *too* high. Maybe an early-retired male schoolteacher with a 1968 political attitude is a good model of Max Weber's "ideal-type" (Marshall 2012). The massive social selectivity and hence non-representativeness of the participants in Germany fundamentally shook the promise of reinventing democracy with more legitimacy and acceptance of decision making. The answer was recruiting people based upon specific sociodemographic features. However, is a woman under 45 and willing to participate in a citizens' jury because there is an allowance of €100 plus free food and drink, the typical female? In comparison, a young mother with a job and career opportunities will hardly take days off work in order to take part in a citizens' panel because of some free food and drinks and a small allowance. The attempts to solve the inevitable problems of people's unwillingness to take part in participation procedures and hence yielding into a massive socially selectiveness evoke the picture of people in quicksand. The more they struggle, the more they sink.

A quick piece of additional information: The concept of representativeness, scientifically and seriously understood, inevitably relies on the principles of random selection and a sufficient number of people. A reliable prediction about the outcome of an election, for instance, needs approximately 1000 interviewees (Hammann and Erichson 1994). The term representativeness is widely misused for any kind of shuffled small groups which could never claim to be this. Participants of citizens' juries and panels, focus groups and the like, never stand the test of representativeness due to the violation of the principles of a large sample

and random selection because most randomly selected persons refuse to participate.

Schumpeter (1942) explained that who decides about the electorate mainly decides about the result. Hence, politicians and administrations often use small group approaches seemingly in order to organize a fake legitimacy for their plans. Subsequently, the tokenism of these manoeuvers is usually apparent and so resistance, especially from concerned parties, is certain. It is not seldom that projects fail because they were built on the assumption that by the means of citizens' participation people can be manipulated, sedated with therapy or placated. These attempts usually fall off Arnstein's Ladder of Participation.

Moreover, failed, faked, and alibi approaches to citizens' participation must have only a limited potential to foster the legitimacy of a political system and the acceptance of its decision making. However, according to our empirical findings from Germany, there might be something like a crisis of the representative democracy system, but this is questionable. The alleged crisis is generally proposed as a result of an apparent decline in voter turnout at elections, but this is simply not the case. A closer examination of the voter turnout in Germany shows that there are cyclical ups and downs. Hence, at the state and federal levels, voter turnouts remain rather high at over 75% at the federal level and 65% at the state level. At about 50–60%, the voter turnouts of the six new German states joining the federation after German unification in 1989 turned out to be significantly lower than the voter turnouts of the old states; exceptions are the city-states which behave more like municipalities in terms of voter turnout (Statista 2017). Thus, comparing data for entire Germany from federal elections before and after 1989, and particularly when choosing a peak year like 1972 with a 91.1% turnout (Statista 2018), gives the impression of a decline in voter turnout. But this is completely wrong. However, when considering only the old states and their voter turnouts from 1949 until today, no decline is apparent. On the other hand, there was a significant decline from about 75% to around 50% starting in the year 1990 at the municipal level. The massive decline in voter turnouts at the municipal level in Germany coincides with the introduction of public petitions and referenda at the local level. It almost appears that the possibility of referenda is killing voter turnout in elections. The voter turnouts in municipal referenda in Germany are very volatile, from sometimes over 80% to occasionally under 20% with an average of about 50%,

exactly like in municipal elections. There is every indication that people only participate if the issue is significant to them.

Consequently, there is no crisis of representative democracy in Germany, especially when direct democratic elements are included. We rather have to observe a crisis of citizens' participation due to very low attendance rates of the people combined with a very selective use, and sometimes misuse, by political and administrative representatives.

Citizens' Participation: How to Bridge the Abyss Between the Ideal and Reality

It is easy to explain the absenteeism of the German population in citizens' participation procedures. People just hate politics and being involved in power struggles. Many citizens' surveys such as democracy audits show that becoming politically active, whether formally in a political party or informally, is extremely unpopular in Germany. The rate of political party members is far less than 1% of the population and is continuously decreasing. People judge involvement in planning and decision-making procedures as neither being effective nor efficient. Moreover, there are no groups or activities in society with more distrust than politics and politicians. Hence, in contrast to the unpopularity of political parties and deliberative citizens' participation procedures, direct democracy together with elections and citizens' surveys are extremely popular. These measures do not take much time, one does not have to meet with political, environmental or other activists personally, while at the same time they (and referenda in particular) ensure the greatest say and influence on decision making. People are interested in politics but not in being involved in doing the dirty work. German people like to delegate the dirty work of politics to people who like to do it but at the same time distrust the political arena to very large degree. Consequently, people want to be informed about the plans of politicians and planners in order to say no and inhibit the plans if they do not agree with them. Direct democratic measures are ideal instruments with which to execute control over the political arena and hence they are so popular amongst the people. According to our findings, we have to distinguish roughly between three groups with very different attitudes towards political engagement:

- Political apathy: Approximately 15–20% of the German population, with a high proportion of migrants, educationally and economically disadvantaged
- Selective utilitarianism: Accounting for approximately 65–75% of the German population. Cost-benefit maximization through the preference of participation measures with rather low costs and a high impact such as elections and referenda. Parts of this group gets very active if their personal interests are concerned such as children or property
- Political activists: Approximately 10–15% of the German population. These people are permanently politically concerned, mostly with protesting against something, for example, nuclear power, wind power, capitalism etc.

Regarding citizens' participation, the majority of people demand the right to at least co-decide or have a say. All relevant empirical studies deliver this result. On the other hand, this is exactly the point where political elites like politicians and planners fundamentally disagree with the people. The political elites want anything but to lose or share their power. Their intention towards citizens' participation is for it to inform the public about their marvelous plans, while they await awesome appreciation and maybe listen to the public's opinions and suggestions but without any binding conditions. For the citizens, of course, these kinds of participation attempts look like manipulation, tokenism or placation, and a falling off of Arnstein's Ladder naturally follows. Sometimes these attempts do not only look like tokenism.

Participating procedures that truly or seemingly only serve alibi purposes must be unattractive. No wonder no one is showing up. However, how will the situation look like if citizens' juries, citizens' panels, and any other kind of deliberative procedure really had the authority to decide? All of a sudden all the usual suspects from the political arena like environmental groups, political party members and trade unionists will show up and dominate the deliberation. The common definition of deliberation includes consensus decisions. In the case of Germany, deliberation might be impossible for some issues. Consensus simply is not possible with the following topics: New construction or enlargement of roads, railway and tram tracks, railway stations and airports as well as sea and river routes, need for traffic in general, flood protection and renaturation of rivers, creeks, lakes and so on, release of wolves and other predatory

animals into or near human settlement areas, prohibiting skiing, mountain biking, sailing and other sports or recreational activities, nuclear power plants, use of coal, wind farms (particularly offshore but generally as well), geothermal power plants, pumped storage power plants, grids, climate change, agriculture and genetic engineering, animal protection and testing, tree felling, prohibiting the eating of meat, the use of sugar, drinking alcohol, soft drinks (too much sugar), biodiversity and so on, food security and health in general, migration, refugees and integration, parking spaces and monuments remembering the casualties of the wars of 1871/71, 1914–1918 as well as 1938–1945 and victims of Nazism, global trade and Donald Trump, German arms exports, growing social inequality, demographic change, gender and transgender issues, #metoo, reducing the noise allowed at public concerts, limiting the opening hours of fairs and festivals. To name just a few.

Traffic, especially car driving versus public transport or riding a bicycle is a major conflict issue between the groups of environmentalists and automobile clubs as well as those other groups lobbying for car drivers. Citizens' participation procedures including agents of both groups will never come to a consensus nor will they show any kind of deliberative behavior. Moreover, representatives and activists always try to get the attention of the media, preferably live on television (see also Fig. 5.1). On the other hand, the more attention from the media, the more conceitedness and less deliberation will happen.[1] A citizens' survey in Hannover, the capital of the state of Lower Saxony, came to the conclusion that the vast majority of people has no excluding pro or contra view on cars in connection to the problem of city traffic (Masser and Möser 2014). On the contrary, the majority of people opted in favor of a municipal traffic concept, which balances the needs of car drivers, public transport, bicycles, and pedestrians equally. A citizens' participation procedure by a small group of people, whatever the result, could never claim legitimacy. In particular, a balanced result giving all kinds of traffic a raison d'être must disappoint both contradictory camps of fundamentalists because it neither gives the predominance to the car nor does it inhibit car driving in the city. Such a balanced result is politically only defensible if it is agreed by a clear majority or a representative result, even if

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[1] For the example of S21 see https://www.uni-hohenheim.de/fileadmin/einrichtungen/komm/PDFs/Komm/Publikationen/Spieker_Bachl_2013_preprint.pdf.

small groups of the fundamental camps will always oppose it. All in all, the acceptance of the balanced result will be at a maximum.

The concept of gamification offers a solution to the tricky problem of organizing citizens' participation in such a way that there is maximum acceptance and hence workable results are possible. Therefore, the two very different groups of the politically active citizens and the selective utilitarians have to be satisfied at the same time:

- Political activists: These people need a platform to present their political ideas as well as themselves, and to discuss and deliberate things intensively.
- Selective utilitarian persons: In contrast, these people initially only want to be spectators but demand to be informed about which issues are discussed in the political arena and what proposals are on the agenda. If the issues are significant, they want to have a say in the course of the decision making.

Obviously, developing a participation game is no trivial matter and hence a great challenge to decision makers like politicians and planners. A participation game must predominantly take the following features into account:

1. Necessarily there has to be some scope to influence the decision making. What initially appears to be a loss of power to elected bodies and planners offers the chance of "smart" governance: Decision makers have to define the scope of results and possibly develop scenarios or variants as basic information for the players or citizens. Furthermore, decision makers design the rules of the game which have to be simple and fair, and thus decide the success or failure of the approach.
2. The game must be attractive to both political activists and selective utilitarians. The former need a platform to perform in public while the latter want to have a say in the final decision making. Only if the game is seen as fun to both groups, will the number of participants be high enough to ensure legitimacy and acceptance.

Two Success Stories About Citizens' Participation: Gamification Is More Than Adding a Clown to a Citizens' Jury

In Germany there are two striking examples of successful citizens' participation involving around 10,000 participants from two cities, both having only slightly more than 150,000 inhabitants and both using gamification. The first example is the PB approach of Potsdam, the capital of Brandenburg State. Potsdam is a model for other examples of PB in Germany, moving from the unsuccessful and non-sustainable Porto Alegre model to an *American Idol*-shaped approach. However, the Potsdam approach is the most successful in Germany as measured by the number of participants together with enduring frequency of performance. Starting in 2008 with under 1% of the electorate—approximately 1000 participants—the number of participants increased to 10,000 in 2015–2016. Preliminary information about the PB for the budget years 2018–2019, by then the seventh PB in a row, indicates that participation has again increased up to 14,000 people or more than 11% of the electorate. No other participation approach in Germany has ever come close to reaching these—still steadily rising—high numbers of participants and sustained the approach over a period of what is now 10 years and 7 PBs.

The secret of the Potsdam PB is the adoption of a gameshow-like format. Most PBs in Germany had been short-lived affairs of only one or two years because they were based on the desire to explain to the public the complexity of a municipal budget and what a hardship it is for civil servants and local politicians to set up the budget year on year. To be frank, the game had only very limited success. It seemed that the story of PB in Germany had ended before it had even started. Nevertheless, a second wave of PB appeared. Initially, the new possibilities of Web 2.0 technologies seemed to trigger the development and new success.[2] However, at a second glance using Web 2.0 technology alone did not assure success. In fact, it was the adoption of gameshow elements which

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[2] Actually the PB of the city of Christchurch in New Zealand was a kind of very early approach to PB with gamification elements, at that time restricted to analogue means due to the fact that Web 2.0 and digital solutions were in the future, see e.g. Sintomer, Yves, and Carsten Herzberg and Anja Röcke. 2010. *Der Bürgerhaushalt in Europa—eine realistische Utopie?: Zwischen partizipativer Demokratie, Verwaltungsmodernisierung und sozialer Gerechtigkeit*. Wiesbaden: VS-Verlag für Sozialwissenschaften.

ensured the success of PB and Web 2.0 was simply very helpful in implementing these approaches. The main characteristics of the Potsdam BP are:

Stage 1: Collection of proposals for municipal projects from citizens

Stage 2: Discussion and deliberation of the proposals with the help of an online portal
- Stage 1 and 2 are mostly attractive to the politically active segment of the people

Stage 3: With the help of the thumbs-up and thumbs-down button, the most impossible or outrageous proposals can be eliminated
- Stage 3 still is highly attractive to the politically active group. On the other hand, the majority of the selective utilitarian citizens—an audience that very much likes TV shows like *Britain's Got Talent*—might join the game right here: Checking the proposals and performances and clicking the thumbs-up or down button is a form of amusement and does not take much time

Stage 4: Checking by the administration and politicians of the legal and financial practicability of the proposals which survived Stage 3

Stage 5: Selection procedure or voting for 10 or 20 proposals that should actually be executed out of the bulk of proposals put forward. Reminiscent to a lot of TV casting shows
- Within the course of stage 5 the final decision making happens and thus it is most attractive to selective utilitarian citizens to take part here. More than 60% of the participation of the Potsdam PB is accounted for by the written survey, about 34% by the online portal, and approximately 4.5% by face-to-face town meetings. The written survey, and the online portal to a lesser degree, mainly serve to decide on the final winning proposals!

The Potsdam BP meets all of our requirements of gamification and the success of the Potsdam PB comes as no surprise:

1. Openness, no fixed results
2. Different levels suiting different groups like the politically active minority as well as the majority of selective utilitarians

3. The possibility of a rematch for proposals which might succeed within the course of the next PB procedure
4. Clear rules everybody can understand
5. Competition, suspense, and entertainment
6. Implementation guarantee for winning proposals.

Our second outstanding example of the renovation of the elevated northern highway in Ludwigshafen on the Rhine won the German engineering award in the category of "traffic in dialogue" due to its citizens' participation concept (Ludwigshafen 2018). The juries reasoning for awarding the prize explicitly stressed the "courage of an open-result process in the course of a complex planning task." At a town meeting, one of the head planners described the challenge as follows: Traditional planning analyzes the task at the very beginning and then theoretically explores alternative solutions. One, two, or three possible alternatives are prepared and subsequently discussed with responsible political bodies and representatives. Politics and planners pick out the preferred option. After the preferred option has been developed, which sometimes taking many years, the result is finally presented to the citizens. Instead of a "Ta-da" moment, often an "Oh, no!" reaction results along with major resistance from the citizens. Hence, traditional planning is at the root of the traditional problems of citizens' participation: tokenism, manipulation, and placation. The planning process according to the elevated northern highway applied a completely different and new approach. As a national highway with important supra-regional traffic functions, certain features of planning are obligatory. Many other characteristics such as whether the road was to be elevated or at ground level were open for discussion. Hence, the planners developed not only one single preferred option but four possible variants, each with specific pros and cons, namely cost, construction period, noise and exhaust pollution, and consequences/options for city planning. These specific features of the four alternatives created the opportunity for citizens to assess the alternatives and hence develop a voting framework. Thus, the game can be used to figure out the option preferred by planners and politicians as well as citizens.

Moreover, thinking in terms of alternative solutions was, according to the head planner, much more challenging and complicated than just developing a single preferred option that signified business as usual for the planner. Developing different options together with the development

of criteria to judge the pros and cons of the options was a much more complicated process. Furthermore, the deeper the planners went into the task, the more interesting it became. More and new aspects of the planning task became much more distinct. Playing with different options on the one hand means additional work, but the pleasure in finding complete new solutions offset the excess work by far. In conclusion, the gamification of the citizens' participation according to the elevated northern highway entailed the gamification of the planning process as well. Maybe an important clue in the explanation of the vast success of the approach: Not only citizens, but planners also had fun.

Another very important aspect in explaining the success of the participation approach to the elevated northern highway is the 3D animated visualization of the four alternative options. Instead of presenting the planning details in the form of construction drawings that general public are unable to understand, in a dusty room in the basement of the town hall for a week or so, the four alternatives could be experienced during a virtual trip through the computer with a mouse or joystick. Consequently, the assessment of the pros and cons according to the different criteria was very easy and significant because everyone could make their own judgment on a solid base.

The enormous success of the elevated northern highway approach to citizens' participation is based on the following aspects:

1. Numerous people affected, partly as local residents, partly as commuting employers. Moreover, the construction and diverted traffic during the construction period will affect the whole town, if not the entire region
2. Involvement of the citizens in the selection of the preferred option in a marvelous way
3. With the help of visualization and 3D animation technology, complex planning matters are understandable to the general public

In conclusion, the elevated northern highway approach is a masterpiece of engineering in respect to both planning and citizens' participation. With the help of gamification a decision was found for all involved groups, namely politicians, planners, and citizens. Not only did those groups find an agreement, but they were even happy doing so.

To sum up, gamification in Germany is still rather an infrequent exception to the rule. The main reason for this in our eyes still lies in the

ongoing attempt to use citizens' participation for tokenism, manipulation and placation in order to push through decisions and predetermined plans. The traditional method of citizens' participation fundamentally violates the principles of gamification, especially the openness of results and the clear and fair rules of the decision-making process.

On the other hand, the more the traditional decision-making trust of politicians, administrators, and specific civic society organizations like environmental groups or trade unions lose legitimacy, then the more a new deal is necessary. In Germany, we see a clear trend towards direct democracy in the form of referenda in order to meet the requirements of the people. Gamification offers a middle way solution somewhere between representative and direct democracy. The vast success of the examples of the Potsdam PB and the elevated northern highway in Ludwigshafen are promising.

What will the future bring? Let's end with a well-known German philosophical quote by G. F. W. Hegel (1770–1831): „Wenn die Philosophie ihr Grau in Grau malt, dann ist eine Gestalt des Lebens alt geworden, und mit Grau in Grau lässt sie sich nicht verjüngen, sondern nur erkennen; die Eule der Minerva beginnt erst mit der einbrechenden Dämmerung ihren Flug" (Hegel 1972).

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