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VOLUME 24

CAPITALISMS COMPARED

LARS MJØSET
TOMMY H. CLAUSEN
Editors

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EDITED BY

LARS MJØSET

Department of Sociology and Human Geography, University of Oslo, Norway

TOMMY H. CLAUSEN

Center for Technology, Innovation and Culture, University of Oslo, Norway

Amsterdam – Boston – Heidelberg – London – New York – Oxford
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AN INTRODUCTION TO THE COMPARISON OF CAPITALISMS

Lars Mjøset and Tommy H. Clausen

In the late 1980s, economist David Soskice first sketched the idea of two basic types of capitalism: one market-based, the other coordinated. But already in 1986, scholars within the French regulation school had published a collective volume on *Capitalismes fin de siècle* (Boyer, 1986) that seriously approached cases of capitalism organized at the national level, both in the rich and the poor worlds. Attention to national cases had actually been a feature of political economy ever since it entered the postwar Western academic world in the wake of the 1960s student movement. Let us sketch a very brief overview:

In the 1970s, the focus was on class/labour unions as well as on the welfare state as an outcome of class compromises. In the 1980s, however, the impact of internal and external financial deregulation moved to the centre of attention, only to be replaced by attention to corporate governance in the 1990s.

Rather than treating these different perspectives as theoretical competitors, we should see how they reflected historical peculiarities of these decades! In the early 1970s, at the end of the big postwar boom, labour's strength in the Western political economies was at an unprecedented historical peak. With the destabilization of the world economy from the early 1970s OPEC oil shock and onwards – clearly linked to geopolitical turbulence – cumulative processes involving worldwide financial flows induced shifts

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in economic policy-making that led to the financial deregulations of the 1980s, intended to solve the problems that had emerged in the post-Bretton Woods period. Burdened in various ways by their welfare-commitments, the states relaxed their interventionist ambitions. This deregulation increased the autonomy of business managers and shareholder interests became increasingly attentive to their position vis-a-vis firm management. In this 1990s context, it is understandable that political economists paid more attention to the study of corporate governance. Furthermore, the end of the Cold War was a blow to grand philosophies of history: the polarization between capitalism and socialism was a thing of the past – the world was now scattered with different types of capitalism.

By today, we have an established research frontier on national capitalisms (Jackson & Deeg, 2006). But within this research frontier, we can distinguish two major clusters. One pursues Soskice's programme, advocating a binary approach in which the market/coordination-dualism is given priority as a high theory distinction. The other approach emphasizes patterned diversity in line with the impulse from the regulation school. In the subsections that follow, we consider each of the two more closely, and on the way, we also present the various contributions to this special issue.

A BINARY APPROACH COMMITTED TO HIGH THEORY, WITH PRIORITY TO ONE FACTOR

Choosing *Varieties of Capitalism* as the title of their 2001 edited volume, Peter Hall and David Soskice monopolized a label that was much too broad for the project they were actually reporting. Their project was in line with a style of research, which may be called "bringing yet another factor back in". That term stems from another pioneering edited volume emerging – like Hall and Soskice's volume – from the Harvard circuit: Evans, Rueschemeyer, and Skocpol's (1985) *Bringing the State Back In*. Following that volume, a number of other factors were "brought back in": classes, geopolitics, finance and so on.

These were not just proposals to bring in a seemingly neglected factor in order to analyse it in conjunction with other factors. The proposals reflected a more or less explicit claim that the factor in question was in some way crucial. The varieties of capitalism programme brings the firm back in, it is "firm-centred" (Hall & Soskice, 2001, p. 8). Hall later contrasted it with the literature focusing on labour movements: "varieties of capitalism

analyses assume that firms are the central actors in the economy whose behaviour aggregates into national economic performance'' (Hall & Gingerich, 2004, p. 7).

This idea of one crucial set of driving forces is sustained by an attitude towards social science methodology that may be called the *standard* one. This view holds that only high-level theory (law-like statements) can turn social research into real science, i.e. something different from a simple defence of selected particularistic views floating around as partisan views or common sense in the public sphere.

There are two ways to get to such high theory: either through the analysis of large-scale datasets or via thought-experimental modelling (Mjøset, 2005). We shall deal first with the latter notion. This idealizing notion of theory implies an insulating strategy of generalization. Thought experiments – which are by necessity general and thus formulated in a mathematical language – are presented as the general theory: model assumptions yield equation systems and the solutions are adopted to the specific cases in question. It is claimed that through such modelling, we get knowledge of what essentially goes on – e.g. in market-based and coordinated economies, respectively. This claim is often supported by a reference to scientific realism, which is the mainstream position in modern, analytical philosophy of the natural sciences. More specifically, a claim for what Hacking (1983) calls ''realism of theories'' is implied. But such a postulate is tenuous, since the model is a thought experiment and the driving forces cannot be directly observed. The term ''insulating'' points to this gap.

Hall and Soskice (2001, p. 5) imply such a notion of theory when they conceive political economy in ''game-theoretic terms'', which amounts to connecting ''new microeconomics to important issues in macroeconomics''. The *one* notion of theory as idealizing thought experiments is thus the basis of the *two* types of market economies: ''In contrast to liberal market economies (LMEs), where the equilibrium outcomes of firm behaviour are usually given by demand and supply conditions in competitive markets, the equilibria on which firms coordinate in coordinated market economies (CMEs) are more often the result of strategic interaction among firms and other actors'' (Hall & Soskice, 2001, p. 8).

Hall and Soskice soon enough face the dilemma inherent in the thought experiment style of high theory. Although they have emphasized that ''a set of formal institutions'' often is ''a necessary precondition for attaining the relevant equilibrium in contexts of coordination'', such institutions ''are rarely sufficient to guarantee that equilbirium. In multi-player games with multiple iterations of the sort that characterize most of the cases in which

we are interested, it is well known that there exist multiple equilibria, any one of which could be chosen by the actors even in the presence of institutions conducive to the formation of credible commitments. Something else is needed to lead the actors to coordinate on a specific equilibrium and, notably, on equilibria offering high returns in a non-cooperative context. In many instances, what leads the actors to a specific equilibrium is a set of shared understandings about what other actors are likely to do, often rooted in a sense of what is appropriate to do in such circumstances'' (Hall & Soskice, 2001, p. 12f).

The main problem is that the thought experiments based on new microeconomics have no direct bearing on the empirical cases. Hall and Soskice (2001, p. 8) describe LMEs and CMEs as ''ideal types at the poles of a spectrum along which many nations can be arrayed''. At many instances, they imply that the empirical cases of Britain and the U.S. are ''close to'' the LME ideal type, while Japan and Germany are ''close to'' the CME ideal type. These empirical cases clearly serve as their *master cases*. But the thought experiment theory is in principle insulated from these empirical cases. If, for instance, Lazonick (in this volume) is right in his scepticism towards a conception of the U.S. economy as a market economy, it is no longer clear what it means that the U.S. economy is close to the LME pole.

Hall and Soskice argue that the ideal types and the focus on firms as central actors are still valuable, since empirically they imply a focus on an economy's capacity for coordination and a focus on firms' strategies and institutional supports (Hall & Soskice, 2001, p. 35). But it turns out that the binary approach is seldom maintained in empirical studies of several cases. Hall and Soskice (2001, p. 33) themselves distinguish two subtypes of CMEs: Asian ones have group-based coordination, while northern European cases have industry-based coordination. Even scholars who stand very close to them prefer a threefold typology akin to the older and well-established welfare-state typology (Esping-Andersen, 1990): Pontusson (2005) distinguishes a Nordic group as a third cluster, and Hall and Gingerich (2004) entertain the idea of a southern European cluster of CMEs. Amable (2003) and Boyer (2005) sketch a five cluster typology.

Such studies are mostly based on the empirical data available in the databases of OECD and other relevant institutions. Thus, the Hall and Soskice approach to varieties of capitalism has also been formulated with reference to the second standard notion of theory, a notion related to the statistical methods most commonly used in the analysis of such datasets. The following statement by Hall refers to what may be called the

law-oriented notion of theory (Mjøset, 2005), and shows awareness of the challenges contained in that kind of high theory ambitions:

"The very emphasis of these models on interaction effects has made it difficult to isolate the impact of each independent variable given the limited development of equation systems modeling their full effects and the small sample (of OECD nations) against which they can usually be tested (…). As a result, there is still an implicit emphasis in this literature on a few ideal-typical countries and the analysis is only slowly being applied to a wider range of nations. Nonetheless, it has generated an important set of propositions of wide potential applicability." (Hall, 1999, p. 145). Later work by Hall and Gingerich (2004) continues in this direction, but employs mainly clustering techniques, conducting only quite rudimentary causal analysis.

Problems relating to this second standard notion of theory are discussed in the special section at the end of this issue of *Comparative Social Research.*

DISCUSSING THE USE OF MULTIPLE REGRESSION IN COMPARATIVE RESEARCH

The second standard notion of high theory implies a segmenting strategy of generalization: the use of large datasets to test correlation-based models. The resulting theory is elaborated with reference to some kind of regression model that fits the data. The label "segmented" is chosen since the various datasets tap into only one specified field of social development. Within this field, the data contain information on many cases, but the quality of the indicators differ: many OECD and welfare state-related datasets are of high quality (although Perraton in this issue also briefly discuss some problems with the use of OECD data), while statistics relevant to other fields (industrial relations, financial systems) may be of more variable quality. Furthermore, in the study of national capitalisms, since data often do not cover enough countries to allow statistical generalization over long enough periods, one must resort to methodological techniques that make interpretations even more uncertain.

Michael Shalev's paper "Limits and Alternatives to Multiple Regression in Comparative Research" address these and related problems. It is followed by a number of shorter, invited comments and a rejoinder by Shalev. In his main paper, Shalev criticizes the use of multiple regression (MR) in comparative research that aims to explain diverse outcomes across a limited range of country cases. The discussion is framed within a re-analysis of four

well-known studies by Rothstein, Hall and Franzese, Western and Esping-Andersen that all used MR to various extents. Shalev finds that tabular and graphical analyses, as well as data reduction techniques are powerful alternatives to MR. He further claims that although technical means are available to deal with many of the shortcomings of MR, these techniques are either largely un-convincing or require too heavy investment in technical skills. Among the invited commentators, we find several scholars who think that Shalev's criticism goes too far, but some also find that he could go further.

Although Lyle Scruggs agree with many of the basic points Shalev raises in his paper, he claims that many of the substantive problems, which arise when MR is applied in macro-comparative research are not remedied by the use of more qualitative methods and techniques. Scruggs further argue that Shalev is wrong as to what MR can basically do, and that the alternatives to MR that Shalev recommends does not provide any improvement over MR, especially when it comes to the evaluation of theories.

Jonas Pontusson criticizes Shalev for presuming that comparative political economists are more or less exclusively concerned with differences between countries. According to Pontusson, research within comparative political economy has been increasingly interested in explaining "within-country variation" and changes. For such objectives Pontusson finds that MR is still useful. He further adds that quantitative political economists have recently started to use hierarchical modelling where data about individuals are nested within countries, an analytical approach Shalev does not discuss in his paper.

Gøsta Esping-Andersen agrees that combining MR with qualitative analysis of cases should be a favoured approach in macro-comparative analysis. He seems to agree with Scruggs, however, as to Shalev's "low tech" alternatives, such as factor analysis. Esping-Andersen claims that these are not superior to MR when it comes to identification issues and selection bias problems. One of his main points is that one should use MR as a diagnostic tool to search for true causal mechanisms.

Although Lane Kenworthy agrees with most of Shalev's comments, he suggests some additional ways in which the use of MR can be improved. By looking at the data in graphical form, presenting the data to the readers, and by "walking the reader" through the analysis and results, the practice of MR can be improved upon. Furthermore, practitioners of MR should take care to clearly specify which variation is being explained and whether short- or long-term effects are being studied.

Bo Rothstein largely agrees with Shalev's critique against the use of MR. Although he does not seem to discard MR altogether, Rothstein argues that

a careful theoretical selection of a few cases with the aim of tracing the process by which the main variables of interest have been connected over time is a superior strategy to statistical analysis when it comes to understanding how causal processes operate. As for the re-analysis of his work, Rothstein simply argues that Shalev's criticism is unfair, unconvincing and misses the main point, as he largely did what Shalev recommends in the first place.

Duane Swanks's main argument echo to some extent Pontusson's insistence upon MR as a necessary component in comparative research and Rothstein's comments above. He insists that contemporary quantitative scholars are in fact attuned to the main problems Shalev highlight in his paper. This argument is developed through a careful discussion of work by scholars identified as sophisticated users of MR. Although Swank concludes that all quantitative comparativists would benefit from reading Shalev's paper, leading scholars within this tradition do a lot better job than Shalev admits when designing and executing research.

Rubinson and Ragin's comment differs from the others. They first argue that MR may be epistemologically, theoretically and methodologically QJ;inappropriate for macro-comparative research. They further claim that Shalev's concerns have been dealt with more completely in the growing literature on Qualitative Comparative Analysis (QCA) and fuzzy-set analysis, and that these methods provide a stronger foundation for case-oriented comparative research than the alternatives to MR set forth by Shalev.

In his rejoinder, Michael Shalev answers many of the critical comments raised by his commentators.

SYSTEMATIC PROCESS ANALYSIS AND THE SEGMENTING STRATEGY OF GENERALIZATION

The responses to Shalev forms a spectrum: On the one side, some scholars (Scruggs, Pontusson) hold that the problems pointed to by Shalev can be remedied by ''internal means''. They are confident about the combination of a standard methodological attitude and the well-established battery of statistical tools, MR in particular.

On the other side, Rubinson and Ragin summarize what Ragin has insisted on in several contributions: the interaction between the standard methodological attitude and the most frequently used statistical methods has brought analytic social science into the doldrooms (Ragin, 2006, p. 633). Rubinson and Ragin thus suggests that non-probabilistic methods such

as those developed by Ragin (2000) will prove to be more satisfactory solutions than those suggested by Shalev. This view also implies a methodological style quite different to the standard one.

We shall return to this below, but let us first note that between the two sides, we find is a big group of scholars. This middle group emphasize that process analysis is something than cannot be taken care of by statistical methods such as MR and related techniques. Within this group, there are again certain nuances. Some scholars (e.g. Esping-Andersen) hold that analysis by MR is what we need in order to get at the mechanisms in comparative political economy. Others hold that one must use other, mostly more qualitative methods, although there is no need to discard MR altogether, since one can use it as part of some sort of triangulation strategy.

At this point, we can return to the Hall and Soskice programme, since this latter position is also implied in their work. In fact, in Hall and Soskice's statements on history and culture, they seem to suggest a quite context-sensitive comparative approach. ''This concept of culture as a set of shared understandings of available 'strategies for action' developed from experience of operating in a particular environment is analogous to those developed in the 'cognitive turn' taken by sociology'' (Hall & Soskice, 2001, p. 12f). While Hall and Soskice's introduction does not specify how to analytically approach ''peculiar environments'', a later methodological contribution by Hall advocates comparative (small-N) case-studies as ''a distinctive approach that offers a much richer set of observations, especially about causal processes, than statistical analysis normally allow'' (Hall, 2003, p. 397). Advocating ''systematic process analysis'' he rejects the standard view of case analysis as the study of just one observation, or as a ''subsidiary version of statistical analysis''.

This notion of process-tracing belongs to a family of more heterodox terms often used in programmatic statements on social science methodology: causal mechanisms (Elster, 1998), multiple conjunctural causation (Ragin, 1986) or causal chains in systems (critical realism, Bhaskar, 1975). Hall's discussion relates only to the statistical, segmenting notion of theory, it lacks a similar assessment as to what game theoretic, rational choice equilibrium analysis has to offer in terms of such process analysis. But as we know from Elster's (2000) work, the same notion of mechanisms has emerged with reference to the insulation of rational choice thought experiments from empirical analysis.

In methodological terms, Hall and Soskice's approach to varieties of capitalism is torn between two distinct strategies of generalization

typical of the standard attitude, and an idea about process tracing as a way to study interactions in peculiar, *historically* formed environments. But this latter kind of study – which indicates a sensitivity to cases – is hard to reconcile with the standard attitude. Theory built upwards on the basis of explanation of cases, is in the standard view at the most a sign of immaturity, a temporary stage which social science should leave behind as soon as possible. Typologies are seen to be descriptions, since theory is regarded as knowledge that can be transformed into formalized statements. Before we discuss a different methodological approach, let us add a brief sociology of knowledge perspective on the standard attitude.

THE PERSISTENCE OF THE STANDARD ATTITUDE

The standard attitude may have its advantages in a world where social scientists always have to manouver in relation to research councils and academic circles in which the natural sciences serve as the methodological benchmark. As one of several possible examples, note that Hall (2003, p. 397) emphasizes that systematic process analysis is frequently used in natural science too, particularly in biology. However, it is important to realise that the use of elements from the natural sciences as heuristics in social science does not necessarily imply a standard attitude. Ragin's (1986, 2000) methods rely on borrowing from electrical engineering. Abbott (2004, p. 178) compared careers by means of sequential comparison algorithms used to compare strands of DNA. Furthermore, there is a strong tradition of evolutionary thinking that draws on biology, both in political science (Pierson, 2004) and in economics (Nelson & Winter, 1982).

As for the LME/CME-dualism specifically, it may have its advantages in the "trading zone" (Galison, 1998) in which bureaucrats, economic policy makers, politicians, economists and other social scientists need a vaguely general language to facilitate communication across different disciplinary cultures. The pair of concepts serve to counter the TINA-arguments – "there is no alternative [TINA] to neoliberal policies in the current age of globalization" – that have flourished since the financial deregulation of the 1980s. With their arguments that institutional complementarities sustain the two types, yielding superior efficiency at the two poles of the spectrum between decentraliation and coordination, Hall and Soskice supported those who claim that CMEs may be as efficient as LMEs. In-between these two poles, efficiency suffers. Their theory can thus be seen as a generalization of the

U-shape relationship earlier established in Calmfors and Driffill's (1988) study of wage bargaining.

But if this is an advantage in the public sphere, it may still be a high price to pay in the community of social scientists, where we are interested in the accumulation of knowledge. It is not even obvious that this general point is useful for policy makers and movements at the national level. For instance, in Hall and Gingerich (2004, p. 15), Japan and Switzerland are outliers, and with reference to the LME/CME-dualism, France and Italy are described as a "hybrid cases" (Hall, 1999, p. 145). But these are important countries. They are "cases" in and of themselves. They are advanced states in which bureaucrats and social scientists face civil societies, with politicians, public opinion and movements. No serious decision maker in these countries would be content with knowledge, which relegates "their case" to status of either an outlier or a hybrid. Since the standard attitude looks at social science as securely demarcated from any such "non-scientific" knowledge, this embeddedness of social science in the real world is disregarded. But single cases may be of overwhelming importance. China is a case of point. The export-orientation of China is certainly the most crucial new element in contemporary capitalism. Appropriately, this volume contain a special study of the Chinese case. McNally uses the varieties of capitalism literature to define as accurately as possible how far into capitalism China has proceeded through the sequence of modifications of its socialist planned economy since the late 1970s.

If we want to discover theory that can contribute to learning at *any* national level, it is interesting to consider theory built from the explanation of specific cases. We must then turn to an attitude different from the standard attitude: the pragmatist attitude.

A VARIETY-ORIENTED APPROACH, COMMITTED TO GROUNDED THEORY, SENSITIVE TO CONJUNCTIONS OF FACTORS

Editing this issue of *Comparative Social Research*, we have tried to contribute to the mapping of "patterned variety" (Ragin, 2000). In line with arguments specified elsewhere (Mjøset, 2006b), we propose to give the term "varieties of capitalism" a content as broad as the term deserves: The number of varieties will not be decided in advance, and the factors driving the development of the various types of capitalism are to be conceived in terms of conjunctures of explanatory factors. We propose

to "stand on the shoulders" of earlier comparative political economy in quite a different way than the "bringing yet another factor back in" style. Rather than have several basic factors "compete" – this implies a danger of "excessive falsification" (Mjøset, 2006b) – we need to locate factors in various fields in order to study their interaction.

Such a methodology reflects a pragmatist, or participationist attitude, distinctly different from the standard one mentioned above. It roots in U.S. pragmatism as much as in European-based historical schools and critical theory traditions. In this methodology, sensitivity to cases is crucial. There are no high theory ideals to be pursued. Rather the view is that social scientific knowledge is accumulated in a number of local research frontiers, which thrive independently of whether the fundamental questions of action, structure and knowledge are actually solved. High theory notions on the standard assumptions – a "spectator" epistemology as the pragmatists would say – are actually not helpful to the accumulation of knowledge, they tend to fragment the social science research community into schools independently of the empirical matters at hand.

The methodology of discovering grounded theory (Glaser & Strauss, 1967) is one specific expression of the pragmatist attitude (others are ethnomethodology, network theory, symbolic interactionism). It is seldom discussed in methodological treatises consulted by macro-oriented researchers, but it is well known from the field of qualitative research in microsociology and in other fields. As shown in Mjøset's contribution to this volume, the methodology of grounded theory is quite capable of clarifying the logic of research in qualitative macro-oriented social science.

The pragmatist attitude alerts us to strategies of generalization, which are different from the standard ones (segmenting and insulating). One is substantive generalization, which proceeds only to the extent that the relevant context is included to define the scope of the generalization (Mjøset, 2006a). Another strategy is that of formal generalization: here general patterns are discovered across various substantive fields of study. This is quite similar to the methodology of mechanisms – but explicitly "from below". If an illustration from classical social science is needed, formal theory is Simmel's style, while substantive theory is Weber's style – think only of the flood of typologies, which make up the brunt of *Economy and Society*.

Macro-economic comparative studies rely mostly on the substantive type of generalization. The literature on comparative capitalisms is a case in point. A recent review article makes the following pertinent remark:

"An important theoretical point is that the comparative capitalisms literature does not have established criteria for dividing an economy into

a fixed number of institutional domains. Nor do the various frameworks within this approach necessarily agree on the defining logic within each domain, on the institutional mechanisms considered most important in each domain, or on the domains that have to be included when constructing a typology of capitalism. Indeed, the diversity and complexity of various typologies of capitalism reflects in part the fact that they are "typologies of typologies", i.e. national or "grand" typologies are assemblages (syntheses) of institutional domain typologies. Even if scholars agree on which domains to include, different typologies may still be used to describe relationships within those domains and thereby generate different national typologies" (Jackson & Deeg, 2006, p. 13).

In our terms, the comparative capitalisms literature relies on a number of local research frontiers of relevance to the study of Western OECD area political economies (and often broader than this too). Each of these research frontiers include attempts to map variety by means of typologies: Jackson and Deeg (2006) find that the following institutional domains are the most important ones in the comparative capitalisms literature: financial systems, corporate governance, inter-firm relations, industrial relations, skill creation, work organization, welfare states and innovation. Perraton's contribution in this issue includes a survey of research in five such fields (labelled trade and market deregulation, wage-labour relations, financial systems, social protection and education).

Although the kinds of fields included may differ, typological contributions are crucial to accumulation of knowledge. From Jackson and Deeg (2006, p. 13) we can draw the following illustrations. As for *finance*, the distinction between bank- and market-based systems has been much used; as for *corporate governance*, there are the insider/outsider and shareholder/stakeholder dichotomies; as for *inter-firm* relations, there is the arm's length versus obligational relations; in the study of *industrial* relations, there is the conflictarian/pluralist/corporatist trichotomy; as for *skill creation*, there is the distinction between state/association/markets/firms; as for *work-organization*, there is Fordism versus flexible specialization versus diversified quality production. The *welfare state* dichotomy (liberal, conservative, social democratic), was already mentioned above and concerning innovation, a main dualism is between systems promoting radical versus incremental innovations.

This list is just a brief indication of one way of summarizing social science knowledge, and all scholars studying comparative capitalism draw on such knowledge, whatever their methodological convictions are. But the attempt to move from these specified typologies to synthesize "typologies of

typologies'' will make little sense within a standard understanding. It is here that the pragmatist attitude makes a difference.

Consider the contributions on comparative capitalisms collected in this volume. They approach the study of contemporary capitalism in a bottom-up way, starting from case studies.

Lazonick and Tylecote and Visintin analyse patterns of corporate governance. Lazonick starts with the three pioneering varieties: Britain, the U.S. and Japan, distinguishing two other major European varieties, France and Germany, from the British one. Then he analyses the transformation of the old U.S. model into a ''New economy'' one, one which as certainly influenced the world economy since the 1990s.

Tylecote and Visintin starts by mapping a larger number of cases with reference to descriptive statistical measures of labour market/labour relations characteristics. They then select further cases with reference to distinctions such as that between shareholder- and stakeholder-orientation. Towards the end, China is included in the analysis, contributing one of the few systematic comparative analyses in which China is explicitly integrated.

These analyses simultaneously achieve both specification and contextual generalization, since the specification of each new case relies on systematic analysis of earlier cases. Mjøset's paper show how this process of theoretical sampling relates to conceptual and theoretical considerations. The paper is a methodological discussion of a German 1980s research project, which ended up studying varieties of world capitalism several years before that kind of label was launched. Mjøset claims that the project may still stand as an important methodological guideline, clearly reflecting a pragmatist understanding. It also yielded a typology of world capitalism that should be further developed as the study of varieties of capitalism crosses the boundaries of the OECD area to deal with the full range of variation in capitalisms across the globe.

In these analyses there is formal grounded theory (or mechanisms, e.g. linkage effects, user/producer-dynamics behind innovation, etc.). But these mechanisms do not yield explanations before they are put into context. This contextualization is guided by state-of-the-art typologies in the various fields. For instance, the U.S. 1990s new economy would be the early case of shareholder-value-oriented corporate governance, with a bank-based financial system, arms length inter-firm relations, pluralist industrial relations, market-based skill-creation and a liberal welfare state.

Combining substantive theory in the form of typologies and periodization with mechanisms, we arrive – as a third step – at systematic process analysis,

e.g. the specified analysis of the U.S. new economy since the early 1990s. Such a study contributes to general knowledge in at least two ways: it may yield knowledge of new mechanisms. Mechanisms are necessary to study the dynamics of cases, which may also lead to a change in context. They are general in a formal sense, meaning that they may recur across research frontiers. It may also lead researchers to improve their typologies in various fields and maybe even consider new fields. For instance, when the research project surveyed by Mjøset began to sample small countries, it turned out that the nature of these countries' dominant export sectors was a relevant new dimension which could fruitfully be linked to a formal theory of economic linkages. The strength of typological maps is that they guide and integrate research in several local research frontiers. General here is different from universal! General means knowledge relevant for a large set of research frontiers/research questions.

Typologies do not fit well into the standard representation-oriented kind of philosophical approach. Typologies will vary according to research question asked. Convergence of theory requires convergence of questions: thus a local research frontier is a cluster of related questions.

But does this legitimate the more synthetic "typologies of typologies"? Under standard assumptions (high) theory is either a set of statements on mechanisms underlying an equation connecting independent with dependent variables, or a system of equations reflecting the researchers' theoretical assumptions on human behaviour. But under pragmatist assumptions, combinations of typologies can be seen as general substantive theory. Such combinations yield complex maps that are general in the substantive sense of providing context in many different local research frontiers. Typologies are tools of specification, thereby allowing us to pass judgements on the scope at which certain mechanisms and social processes operate. Typological maps display patterned variety, they map cases with reference to dimensions of cases. Typologies provide context that may be useful when we are to interpret the findings of large cross-national empirical studies. They may inspire quantitatively oriented researchers to investigate new variables and indicators! They may inspire work on more specified typologies in other dimensions.

The binary approach to varieties of capitalism has emphasized institutional complementarities. Systematic process analysis shows complementarities at work. A grounded, pragmatist approach would better than the binary approach bring out the potentials of the notion of complementarities. We must approach the complex links between various dimensions which will always be less than full complementarity and more than full autonomy of each

dimension vis-a-vis the others. We thus avoid the polarization between full complementarity (lock-in) versus synchronized change across all dimensions, a polarization dealt within Perraton's contribution.

Perraton evaluates a large number of recent works on national capitalisms. He suggests that researchers should pay more attention to the study of institutional change, rather than just to institutional complementarities. He is also critical of the polarization between research on national capitalisms and research on globalization. Even students of national capitalism, he holds, should pay attention to convergence and common trends across countries, thereby explicating the mechanisms that link international and national processes of change, studying also globalization in a grounded way (periodization is here of parallel importance to typologies). We must be alert to the historically specific mix between globalization and national specificities.

We can here distinguish the relative merits of developing contextual maps as compared to discussing the effects on performance indicators. There are large literatures linked to specified dependent variables (such as the growth accounting literature in applied economics). Our point is not that the programme of mapping the varieties of capitalism would yield better (e.g. in terms of "explained variance") models to measure the net effect of selected independent variables on the standard performance variables. Statistical analyses are necessary, but one will need to experiment with methods more sensitive to cases, use the low-tech techniques suggested by Shalev, and – if MR is used – beware of the spontaneous methodology that often comes with it: segmented generalization may not facilitate the analysis of complementarities.

Our plea for substantive grounded theory uses the metaphor of a map or a matrix: applied to the varieties of capitalism literature, this would imply a horizontal line of as many as possible national capitalisms, and a vertical line of dimensions. Our goal should be to fill in the various spaces of the matrix, and even: for as many as possible periods. Such a study of contemporary capitalism must be a collective project.

Drawing these maps, we must commit ourselves not just to the best datasets, but also to the knowledge available in the best case studies. From the standard vantage point such a programme will surely be accused of being empiricist, pedantic, encyclopaedic and over ambitious. But it finds a methodological justification in pragmatism and more recent philosophy of social science. We must realize that similar programmes have proved to yield systematic knowledge in several other fields of social science, cf. e.g. the work of Rokkan (1999) and his followers in political sociology, and

Esping-Andersen (1990) in the study of modern Western welfare states. As for Esping-Andersen's work we are then emphasizing his typological contributions as more significant than the statistical aspects of his work. As for Rokkan, his later work (as shown in Mjøset, 2000) is a prime example of how to accumulate knowledge in the form of typological maps tailored to a specific set of research questions.

Combining the two pragmatist approaches to generalization (substantive typologies and formal mechanisms), we are able to specify and generalize at the same time: we are better able to say specifically what is peculiar e.g. to the new U.S. economy, and since we do this in a systematically comparative way, we are also able (by saturating the analysis with reference to other scholars' work on other national capitalisms) to specify the scope of our generalizations. Such grounded theory would most certainly not be very parsimonious, but its explanatory power with respect to what actually goes on in cases, would be strong.

Collective efforts to establish continuously improved typological maps should be an important part of the comparative capitalisms research frontier. We need to have national (case) specialists working together, but with schemes that are comparatively oriented, so that findings can always inspire the study of other cases. The papers we here publish on substantive cases of capitalist development contribute to such a programme.

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VARIETIES OF CAPITALISM AND INNOVATIVE ENTERPRISE☆

William Lazonick

1. VARIETIES OF CAPITALISM, MARKET FORCES, AND INNOVATIVE ENTERPRISE

In their well-known contribution to the "varieties of capitalism" debate, Peter Hall and David Soskice (2001, Ch. 1) highlight the distinction between a "coordinated market economy" as exemplified by Germany and a "liberal market economy" as exemplified by the United States. Under the heading, "Liberal Market Economies: The American Case", Hall and Soskice (2001, p. 27), argue:

> Liberal market economies can secure levels of overall economic performance as high as those of coordinated market economies, but they do so quite differently. In LMEs, firms rely more heavily on market relations to resolve the coordination problems that firms in CMEs address more often via forms of non-market coordination that entail collaboration and strategic interaction. In each of the major spheres of firm endeavor, competitive markets are more robust and there is less institutional support for non-market forms of coordination.

In effect, Hall and Soskice accept the conventional ideology that, in terms of the coordination of productive activity that results in superior economic

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performance, the United States – the world's largest and richest economy – can be understood as a "market economy". This essay is devoted to the proposition that, in comparative perspective, the organization and performance of the US economy, as well as other advanced capitalist economies, must be understood and differentiated from one another in terms of the *corporate* allocation, not market allocation, of productive resources (see Lazonick, 2003).

To view the United States as essentially a "market economy" is to ignore the role of powerful businesses enterprises that engage in innovation in shaping market forces, including the institutions that serve to allocate labor and capital to alternative uses. To view the United States as a "*liberal* market economy" is to ignore the role of the developmental state in allocating resources to infrastructural investments in education, research, and communications that enable innovative enterprises to emerge and survive. The defining characteristic of capitalism is *innovative enterprise*: the interaction of individuals – often numbering in the tens of thousands or hundreds of thousands – in highly coordinated business organizations that can transform technologies and access markets to generate the higher quality, lower cost products that underpin economic growth. To understand "varieties of capitalism", one must begin with an analysis of the role of innovative enterprise – the quintessential "capitalist" institution – in the development of the economy.[1]

From this perspective, the state contributes to the performance of the economy less as a regulator of markets and more as an investor in infrastructures that support the innovation process. But the developmental state requires innovative enterprise. The developmental state does not itself generate higher quality, lower cost products. Without innovative enterprise, state investment in infrastructures would simply result in wasted resources. Fundamental to the analysis of "varieties of capitalism", I argue, is the analysis of "varieties of innovative enterprise".

Elsewhere, I have elaborated a theory of innovative enterprise that focuses on roles of strategy, organization, and finance in the growth of the firm (see Lazonick, 2006c). Taking as its starting point the principles of innovative enterprise that derive from that theory, this essay presents a comparative-historical synthesis of national "business models" that underpin varieties of advanced capitalism. In Section 2, I sketch out the "social conditions of innovative enterprise" framework that unifies the comparative-historical synthesis. In Section 3, I explain the form and content of these social conditions in the US "Old Economy" business model that dominated the US economy into the 1980s. In Section 4, I compare and contrast the

social conditions of innovative enterprise that characterized the Japanese challenge to the US Old Economy model. Then, in light of the US–Japanese comparison, Section 4 also focuses on varieties of innovative enterprise in Western Europe, with sketches of the distinctive British, German, and French business models. Section 5 then turns to the evolution of the "New Economy" business model in the United States in the last decades of the 20th century, and its emergence as the dominant high-tech business model by the beginning of the 21st century. In the conclusion I address some of the implications of the comparative-historical analysis of varieties of innovative enterprise for competitive performance, and elaborate on the dynamic interaction of innovative enterprise and the developmental state.

2. SOCIAL CONDITIONS OF INNOVATIVE ENTERPRISE

Empirical research into the characteristics of the innovation process reveals that it is *uncertain*, *collective*, and *cumulative* (O'Sullivan, 2000b). The outcome of the process cannot be predicted when investments are made, and the transformation of investments into innovation cannot be done by one person alone and cannot be done all at once (Penrose, 1959; Best, 1990, p. 125). A strategy to overcome uncertainty requires a collective and cumulative learning process. In the theory of innovative enterprise, the role of strategy is to confront uncertainty, the role of organization is to generate collective learning, and the role of finance is to sustain cumulative learning. Innovation is a social process, supported in certain times and places by what can be called "social conditions of innovative enterprise".

The theory of innovative enterprise permits us to identify three social conditions that can transform strategy, organization, and finance into innovation, and thus support the process of economic development. The social conditions of innovative enterprise manifest themselves in social relations that are central to the development of the economy. In the remainder of this section of the paper, I will define these social conditions, and in the next sections I will show how they differ across nations characterized by distinctive economic institutions for governing the allocation of resources, employing labor, and financing investment.

The social condition that can transform strategy into innovation is *strategic control*: a set of relations that gives decision-makers the power to allocate the firm's resources to confront the technological, market, and competitive uncertainties that are inherent in the innovation process.

For innovation to occur, those who occupy strategic decision-making positions must have both the abilities and incentives to allocate resources to innovative investment strategies. Their abilities to do so will depend on their knowledge of how the current innovative capabilities of the organization over which they exercise allocative control can be enhanced by strategic investments in new, typically complementary, capabilities. Their incentives to do so will depend on the alignment of their personal interests with the interests of the business organization in attaining and sustaining its competitive advantage.

The social condition that can transform organization into innovation is *organizational integration*: a set of relations that creates incentives for people to apply their skills and efforts to organizational objectives. The need for organizational integration derives from the developmental complexity of the innovation process – that is, the need for organizational learning – combined with the imperative to secure high levels of utilization of innovative investments if the high fixed costs of these developmental investments are to be transformed into low unit costs. Modes of compensation (in the forms of promotion, remuneration, and benefits) are important instruments for integrating individuals into the organization. To generate innovation, a mode of compensation cannot simply manage the labor market by attracting and retaining employees. It must be part of a reward system that manages the learning processes that are the essence of innovation; the compensation system must motivate employees as individuals to engage in collective learning. This collective learning, moreover, cumulates over time, thus necessitating financial commitment to keep the learning organization intact.

The social condition that can transform finance into innovation is *financial commitment*: a set of relations that ensures the allocation of funds to sustain the cumulative innovation process until it generates financial returns. What is often called "patient" capital enables the capabilities that derive from collective learning to cumulate over time, notwithstanding the inherent uncertainty that the innovation process entails. Strategic control over internal revenues is a critical form of financial commitment, but such "inside capital" must often be supplemented by external sources of finance such as stock issues, bond issues, or bank debt that, in different times and places, may be more or less committed to sustaining the innovation process.

The "social conditions of innovative enterprise" perspective asks how and under what conditions the exercise of strategic control ensures that the enterprise seeks to grow using the collective processes and along the cumulative paths that are the foundations of its distinctive competitive success

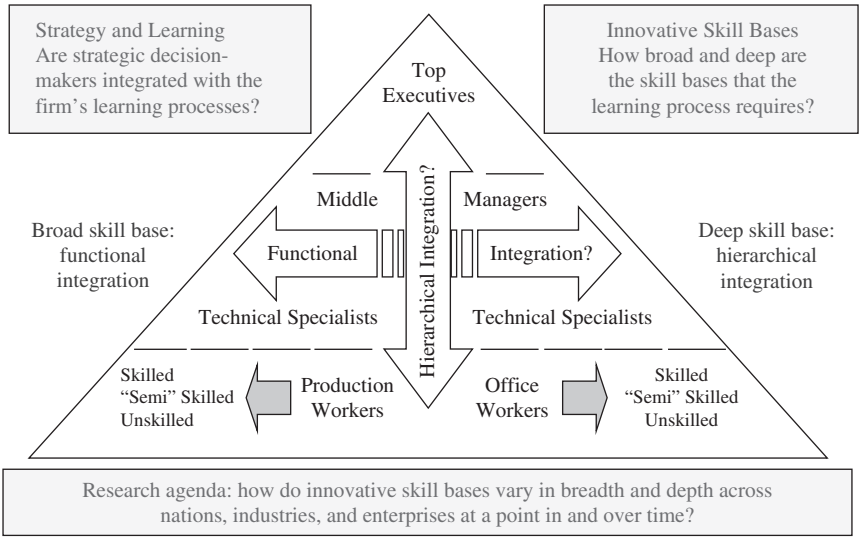

Fig. 1. Strategy, Organization, and Skill Bases in the Theory of Innovative Enterprise.

(for applications, see Carpenter, Lazonick, & O'Sullivan, 2003; Lazonick & Prencipe, 2005; Lazonick, 2006a). Of central importance to the accumulation and transformation of capabilities in knowledge-intensive industries is the *skill base* in which the firm invests in pursuing its innovative strategy (see Fig. 1). Within the firm, the division of labor consists of different functional specialties and hierarchical responsibilities. At any point in time a firm's functional and hierarchical division of labor defines its skill base. In the effort to generate collective and cumulative learning, those who exercise strategic control can choose how to structure the skill base, including how employees move around and up the enterprise's functional and hierarchical division of labor over the course of their careers. At the same time, however, the organization of the skill base will be constrained by both the particular learning requirements of the industrial activities in which the firm has chosen to compete and the alternative employment opportunities of the personnel whom the firm wants to employ. The innovative enterprise requires that those who exercise strategic control be able to recognize the competitive strengths and weaknesses of their firm's existing skill base and, hence, the changes in that skill base that will be necessary for an innovative response to competitive challenges. These strategic decision-makers must also be able to

mobilize committed finance to sustain investment in the skill base until it can generate higher quality, lower cost products than were previously available.

In cross-national comparative perspective, as will be shown in the next sections of this paper, the skill base that enterprises employ to transform technologies and access markets can vary markedly even in the same industrial activity during the same historical era, with different competitive outcomes. Precisely because innovative enterprise depends on social conditions, the development and utilization of skill bases that occur in one institutional environment may not, at a point in time at least, prevail in another institutional environment. Moreover, even within the same industry and same nation, dynamic capabilities that yielded innovative outcomes in one historical era may become static capabilities that inhibit innovative responses in a subsequent historical era.

If one accepts that business enterprises are social structures that are in turn embedded in larger (typically national) institutional environments, a theory of innovative enterprise must itself be embedded in a model of the relations among *industrial sectors*, *business enterprises*, and *economic institutions* that can support the processes that can transform technologies and access markets to generate products that are higher quality and/or lower cost than those that had previously existed. Fig. 2 provides a schematic perspective of the interactions among sectors, enterprises, and institutions in shaping the social conditions of innovative enterprise. First, I shall explain

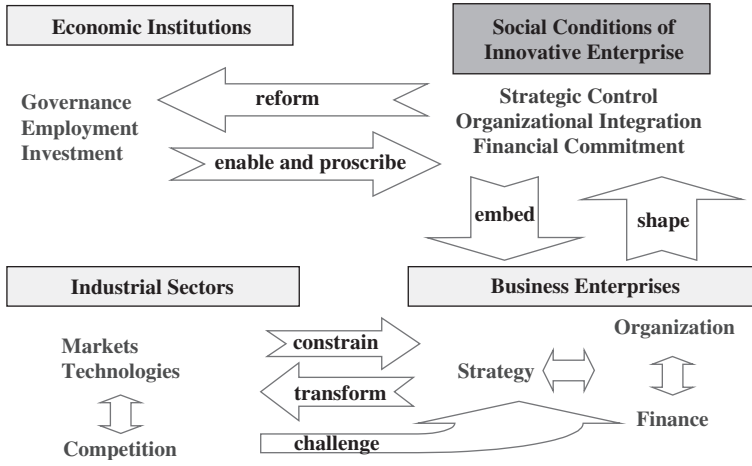

Fig. 2. Social Conditions of Innovative Enterprise.

the interactions depicted in this diagram, and then I shall turn to a summary of the variation in social conditions of innovative enterprise across the largest developed nations in the last decades of the 20th century.

Innovation differs across industrial sectors in terms of the technologies that are developed and the markets that are accessed. In the theory of the optimizing firm, business enterprises take technologies and markets as given: they constrain the "strategy" of the business enterprise to be like that of each and every other firm in the industry (see Lazonick, 2006c). In the theory of the innovating firm, in contrast, enterprise strategy transforms technology and markets. In doing so, strategy confronts technological uncertainty – the possibility that an innovative investment strategy will fail to develop higher quality products or processes – and market uncertainty – the possibility that the strategy will fail to access a large enough extent of the market to transform the high fixed costs of developing these products and processes into low unit costs. But, as indicated in lower part of Fig. 2, the innovating firm must also confront competitive uncertainty – the possibility that even if the firm is successful in transforming technology and accessing markets to develop higher quality, lower cost products than were previously available, competitors will do it better and cheaper.

The rise of new competition poses a challenge to the innovating firm. It can seek to make an innovative response or, alternatively, it can seek to adapt on the basis of the investments that it has already made by, for example, obtaining wage and work concessions from employees, debt relief from creditors, or tax breaks or other subsidies from the state (see Lazonick, 1993). An enterprise that chooses the adaptive response in effect shifts from being an innovating to an optimizing firm. How the enterprise responds will depend on not only the abilities and incentives of those who exercise strategic control but also the skills and efforts that can be integrated in its organization and the committed finance that, in the face of competitive challenges, can be mobilized to sustain the innovation process.

If and when innovation is successful in a particular nation over a sustained period of time, the types of strategic control, organizational integration, and financial commitment that characterize the nation's innovating firms will constitute distinctive social conditions of innovative enterprise. Why, one might ask, would the social conditions of innovative enterprise exhibit similar characteristics across firms in a nation, particularly when they are engaged in different industries? Or, to put the question differently, why would not the social conditions of innovative enterprise be the same for all firms in all industries across all nations? The answer to both questions, as depicted in Fig. 2, is that historically nations differ in their institutions.

At any point in time these institutions both enable and proscribe the activities of firms, while over time distinctive elements of these institutions become embedded in the ways in which firms function. Of particular importance in influencing the social conditions of innovative enterprise are *economic* institutions related to *governance*, *employment*, and *investment*. Through a historical process, the strategic, organizational, and financial activities of a nation's innovative enterprises shape the characteristics of these economic institutions, but these institutions also exist and persist independently of these enterprises as part of the "social fabric" – the rules and norms of the nation applicable to economic activity that find application in the social relations of that nation's firms.

Governance institutions determine how a society assigns rights and responsibilities to different groups of people over the allocation of its productive resources and how it imposes restrictions on the development and utilization of these resources. Employment institutions determine how a society develops the capabilities of its present and future labor forces as well as the level of employment and the conditions of work and remuneration. Investment institutions determine the ways in which a society ensures that sufficient financial resources will be available on a continuing basis to sustain the development of its productive capabilities. These economic institutions both enable and proscribe the strategic, organizational, and financial activities of business enterprises, thus influencing the conditions of innovative enterprise that characterize social relations within any given firm at any point in time. As these business enterprises succeed at innovation, they may reshape the conditions of innovative enterprise; for example, their strategic decision-makers, acting collectively, may take steps to reform these institutions to suit the new needs of their enterprises.

This highly schematic perspective, therefore, posits a dynamic historical relation between organizations and institutions in the evolution of the social conditions of innovative enterprise. To go beyond this schema requires the integration of the theory of innovative enterprise with comparative research on the evolution of the conditions of innovative enterprise in different times and places. To study the innovative enterprise in abstraction from the particular social conditions that enable it to generate higher quality, lower costs products is to forego an understanding of why a firm became innovative in the first place and how its innovative capabilities may be rendered obsolete. A comparative-historical analysis enables us to learn from the past and provides working hypotheses for ongoing research (for an explication of this integrative methodology, see Lazonick, 2002b; for a comparative-historical synthesis of the innovative firm, see Lazonick, 2004c).

For a first example of such a working hypothesis, the comparative-historical experience of innovative enterprise suggests that, contrary to a common belief that has persisted since the late 19th century, the form of firm ownership is not the critical issue for understanding the type of strategic control that supports innovative enterprise. Critical are the abilities and incentives of those managers who exercise strategic control. Whether they are majority owners of the firm, state employees, or employees of publicly listed companies, one needs to know where and how these strategic managers gained the experience to allocate resources to the innovation process, and the conditions under which their personal rewards depend on the firm's innovative success.

Secondly, the most fundamental, if by no means the only, source of financial commitment for the innovating firm is to be found in those revenues that are generated by the firm itself. Retentions form the foundation of corporate finance (Myers & Majluf, 1984; Corbett & Jenkinson, 1997; O'Sullivan, 2004). The use of bank finance to leverage internal funds in providing financial commitment requires close relations between financial institutions and innovating firms, as for example in the Japanese model. In certain times and places, the stock market can provide some well-positioned firms with financial commitment. But as an investment institution, the major role of the stock market is to provide liquidity to productive investments that have already been made, not commitment to finance new productive investments. It enables owner-entrepreneurs and venture capitalists to cash out of their investments in startup companies, and it enables households to diversify their savings portfolios so that they can (hopefully) tap into the yields of the stock market, either directly or by entrusting their savings to institutional investors, without having to devote time and effort to understanding and monitoring the innovative capabilities of the companies that have listed their equities on it.

Thirdly, while strategic control and financial commitment are essential to innovative enterprise, it is organizational integration that determines the innovative capability that a firm actually possesses. The types of organizational integration that result in innovation vary across industries and institutional environments as well as over time. The hierarchical and functional divisions of labor that, when integrated into learning processes, have generated innovation in the past cannot necessarily be expected to do so in the future when faced with changes in technology, markets, and competition – changes that to some extent successful innovation in itself brings about.

In a theory of innovative enterprise, strategy, finance, and organization are interlinked in a dynamic process with learning as an outcome. To fully

comprehend innovative enterprise, there is a need to understand the actual learning processes: the relation between tacit knowledge and codified knowledge, between individual capabilities and collective capabilities, and between what is learned at a point in time and how that learning cumulates over time (see Lazonick & O'Sullivan, 2000b). The prevailing social conditions of innovative enterprise provide the context for those learning processes, shaping the types of learning that are attempted, the extent to which these processes are sustained, and the ways in which people interact both cognitively and behaviorally in the learning process. The influence of the social context is manifested by the functional and hierarchical integration of skill bases that can vary dramatically across industries and institutional environments as well as over time (Lazonick, 2004c).

3. THE US OLD ECONOMY MODEL[2]

The US business model was dominant in global competition in the post-World War II decades (see Fig. 3). A basic characteristic of this business model was the separation of share ownership and managerial control.

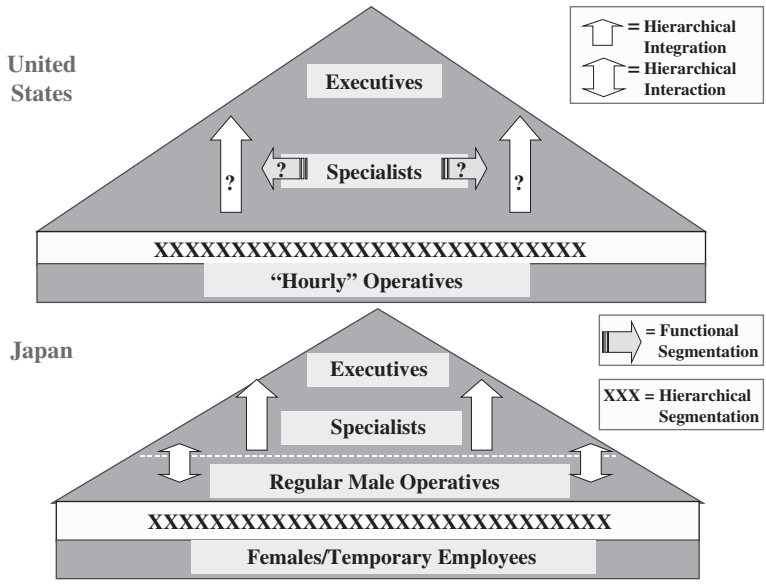

Fig. 3. US Old Economy and Japanese Business Models Compared.

The existence of well-developed stock markets, most notably the New York Stock Exchange (NYSE), had during the first decades of the century resulted in the fragmentation of shareholding, leaving career managers in control of the allocation of corporate resources. In principle, boards of directors representing the interests of shareholders monitored the decisions of these managers; in practice, incumbent top executives chose the outside directors and were themselves members of the board. Shareholders could challenge management through proposals to the annual general meeting, but over the course of the 20th century a body of law evolved that enabled management to exclude stockholder proposals that dealt with normal business matters (for example, acquisitions or downsizings) as distinct from social issues (for example, sex discrimination or corporate pollution).

Having spent their careers with the companies that they came to head, top executives saw themselves as "organization men". As such, they tended to act in the interests of the organizations rather than just themselves; their own career success depended on the success of the enterprise as a whole. In the immediate post-World War II decades the salaries of top executives of US corporations remained constrained by the hierarchical salary structures of the managerial organizations over which they presided. Already in the 1950s, however, top executives of these companies were receiving stock options, a mode of compensation that, as I argue below, was ultimately destructive of the organizational integration of those in positions of strategic control.

The US business model worked effectively to generate innovation when executives who exercised strategic control were integrated with an organization of administrative and technical specialists who engaged in the development and ensured the utilization of the company's productive resources. These "organization men" were on career paths along which they moved up and around a particular corporate hierarchy, with the possibility, even if not the high probability, of themselves rising to top executive positions. These cohesive managerial structures encouraged the functional integration of the capabilities of administrative and technical specialists, contributing to the world's most formidable systems of mass production.

At the same time, however, a distinctive feature of the US model was the organizational segmentation between, in the upper part of the hierarchy, salaried managers, in whose training and experience the corporation made heavy investments, and, in the lower part of the hierarchy, so-called "hourly" workers who, while they often spent their entire working lives with one company, were considered to be interchangeable commodities in whose capabilities the company had no need to invest.[3] Salaried managers entered

these corporations with higher education degrees from a well-funded, government-supported system whose curricula had historically been shaped by the needs of business corporations for technical and administrative personnel. Hourly workers entered these corporations with high school diplomas that generally reflected mediocre educations.

Nevertheless, union representation, seniority hiring and firing, overtime pay, the need of corporations for reliable even if low-skilled workers to tend mass production processes, and the success of the US model combined to enable these hourly workers to receive good pay and benefits. As a rule, however, the hourly worker could over the course of his or her working life at best hope to rise to the rank of foreman, a salaried position that (as was the case for all salaried employees) denied these supervisors the right to be represented in collective bargaining but was generally dead-end in terms of any further career mobility up the managerial hierarchy. Meanwhile a central preoccupation of salaried managers in the post-World War II decades was to develop skill-displacing automated technologies so that in "the factory of the future" their companies could dispense with the employment of hourly workers whom they viewed as being undereducated, underskilled, and overpaid.

The US industrial corporation received considerable financial support from government programs for technology development in areas such as aerospace, computers, and life sciences. The development of the productive potential of these government investments relied on corporate research capabilities, but, given the size and duration of the investments involved, even the largest and most successful business corporations would not have been able or willing to finance them on their own. Retained earnings formed the financial foundation for the investments that the corporations did make; in the 1960s and 1970s corporate taxes were about 39 percent of corporate profits (including inventory valuation and capital consumption adjustments), dividends were about 25 percent, and retentions about 36 percent. When corporations needed additional investment financing, they issued corporate bonds at favorable rates that reflected conservative debt-equity ratios. Bank loans were used almost exclusively for working capital. Companies made only limited use of the stock market as a source of investment funds.

As I discuss below, during the 1970s and 1980s, the US model began to falter in the face of Japanese competition that integrated shop-floor workers into the processes of organizational learning. In addition, the internal cohesion of the managerial organizations of US corporations weakened, particularly as corporations grew bigger and diversified into many different lines of business. The conglomerate movement of the 1960s segmented top

executives from the rest of the managerial organization. Increasingly, moreover, an integrative hierarchical reward structure ceased to regulate the pay of top executives, who embraced wholeheartedly the ideology of maximizing shareholder value as their boards bestowed on them ever more generous stock option awards. At the same time, in the high-tech industries, younger professional, technical, and administrative personnel became much less dependent on the pursuit of careers within Old Economy corporate hierarchies as the creation of new firms based on a New Economy business model provided them the possibility of using interfirm mobility to pursue alternative career paths.

4. THE JAPANESE CHALLENGE[4]

In the 1970s and 1980s, the Japanese business model directly confronted the US Old Economy model, as depicted in Fig. 3. In the post-World War II decades, US managerial corporations dominated in international competition in a wide range of high technology industries. Many of these corporations had been accumulating innovative capabilities from the late 19th century. During the depressed years of the 1930s, even those US industrial corporations that cut back production and employment dramatically nevertheless continued to invest in R&D and enhance their innovative capability. Within the new structure of cooperative industrial relations that emerged out the conflicts of the depression years, US industrial corporations were able to take advantage of the post-World War II boom to re-establish themselves as the world's pre-eminent producers of consumer durables such as automobiles and electrical appliances and related capital goods such as steel and machine tools. With the help of US government research support and contracts, US companies also became the leaders in the computer and semiconductor industries.

Then in the 1970s and 1980s, Japanese companies challenged the US industrial corporations in the very industrial sectors in which even as late as the 1960s US corporations seemed to have held insurmountable competitive advantage. Building on the development of innovative capabilities in their home market during the 1950s and 1960s, Japanese companies gained competitive advantage over US companies in industries such as steel, memory chips, machine tools, electrical machinery, consumer electronics, and automobiles. Initially, as Japanese exports to the United States increased rapidly in the last half of the 1970s, many observers attributed the challenge to the lower wages and longer working hours that prevailed in Japan. By the early

1980s, however, with real wages in Japan continuing to rise, it became clear that Japanese advantage was based on superior capabilities for generating higher quality, lower cost products.

Three business institutions – stable shareholding, permanent employment, and main bank lending[5] – provided the social conditions for Japan's remarkable success. Stable shareholding ensured that the top managers of Japanese industrial corporations would possess the strategic control required to make innovative investments in industries in which in the 1950s there was no inherent reason to believe that they would ultimately be successful in international competition. Permanent employment enabled the companies involved to put in place a new model of hierarchical and functional integration that enabled them to engage in collective and cumulative learning in ways that their international competitors could not. Main bank lending supplied these companies with a level of financial commitment that permitted them both to grow rapidly and to sustain the innovation process until they could generate returns first on home and then on foreign product markets. Let us look briefly at how these institutions evolved and became embedded in the functioning of the Japanese industrial enterprise in the post-World War II decades.

In 1948 the Supreme Commander for the Allied Powers – the occupation authority in Japan – began the dissolution of the *zaibatsu*, the giant holding companies that had dominated the Japanese economy from the Meiji era of the late 19th century to World War II. The dissolution process not only dispossessed the families that owned the *zaibatsu* but also removed from office the top management layers of the *zaibatsu* holding companies and major affiliated companies. Taking over control of strategic decision-making in Japan's industrial enterprises were "third-rank executives", primarily engineers who were plucked from the ranks of middle management to take leadership positions of companies that had no alternative but to find new uses for their accumulated capabilities in non-military markets.

The control exercised by these young and ambitious executives was by no means secure. There was a fear that shareholders, almost 70 percent of whom were individuals, might join forces to demand the traditional control rights as owners. To invest in the capabilities of their companies, enterprise managers needed to maintain as much control as possible over the allocation of corporate revenues. But the undeveloped state of the companies subsequent to the dissolution of the *zaibatsu* and the structure of public shareholding left Japanese enterprises vulnerable, if not to takeovers, then to debilitating demands from outside interests for the distribution of their earnings if and when such earnings should appear.

To defend themselves against demands for "shareholder value" by these outside interests, the community of corporate executives engaged in the practice of cross-shareholding. Banks and industrial companies took equities off the market by holding each other's shares. Increasingly, business relations among companies, be they industrial or financial, became cemented by cross-shareholding arrangements, with a company that had closer relations with another company being more likely to hold larger amounts of that company's shares, up to the legal maximum of 5 percent of shares outstanding (or 10 percent in the case of holdings by insurance companies). Over time, as business relations among financial and industrial enterprises changed, the web of cross-shareholding became more intricate so that *mutual* shareholding between two companies ceased to be an important feature of the system; what became important was the dense network of stable shareholding. The institution of stable shareholding is not based on contractual relations but rather has been sustained by the willingness of the entire Japanese business community to accept that one company does not seek its own advantage by selling its shareholdings of another company to public shareholders.[6]

Japanese companies have routinely given their proxy votes to the managers of the companies whose shares they hold. To reduce the possibility for outside shareholders to press their demands on management, virtually all companies listed on the Tokyo Stock Exchange have held their annual general meetings of shareholders at the same time on the same day – the last Friday in June at 2:00PM, with the meetings lasting on average, over the course of the 1990s, 28.37 minutes (Hilary & Oshika, 2003, p. 41). Nevertheless, until the government cracked down on the practice in the mid-1990s, *yakusa*, members of Japanese organized crime, routinely extorted bribes from Japanese top managers in return for promises not to ask embarrassing questions at the shareholders' meeting, and, with the bribe having been paid, to intimidate anyone else in attendance who might be thinking of doing so.

By 1955, according to its broadest, and most relevant, definition as stock in the hands of stable shareholders who would not unilaterally sell their shares on the market, stable shareholding represented 25 percent of outstanding stocks listed on the Tokyo Stock Exchange, and by 1960 it had risen to about 40 percent. It declined slightly in the early 1960s, but after the opening up of Japanese capital markets in 1964, when Japan joined OECD, the business community, fearing foreign takeovers, took steps to increase stable shareholding. It surpassed 60 percent in 1975, and remained above that figure until 2000, peaking at 67.4 percent in 1988. During the

recessionary years of the 1990s, there was a gradual decline of stable shareholdings to 62 percent in 1998 and then a sharp drop to 57 percent in 2000. Financial institutions, burdened by mountains of non-performing loans and compelled to realize the value of their shares to restore capital-adequacy ratios, accounted for the vast majority of the sell-offs while foreigners accounted for almost all of the increase in the proportions of all outstanding shares held.[7]

From the 1950s corporate managers used the strategic control that stable shareholding protected to build organizations characterized by functional and hierarchical integration (see Fig. 3). Critical to this organization-building were the investments in an educated labor force that the Japanese government had made since the last decades of the 19th century. In the decades after the Meiji Restoration of 1868, the primary and secondary education of the entire population was raised to a high level. Simultaneously, a transformation of the system of higher education generated a growing supply of university graduates who entered industry. In addition to paying them well, the companies often incurred the considerable expense of sending these highly educated employees abroad for varying lengths of time to acquire industrial experience.

As a result, in the aftermath of World War II, Japanese companies could draw on a sizable supply of highly educated and experienced engineers and managers. Many Toyota employees, for example, had accumulated relevant technological experience over the previous decades working for the enterprise group when it was Japan's leading producer of textile machinery. In addition, the automobile industry was able to attract many engineers who had gained experience in Japan's aircraft industry before and during the war.

Before the war, moreover, many Japanese companies had integrated foremen into the structure of managerial learning so that they could not only supervise but also train workers on the shop floor. Whereas in the United States, the foreman, as "the man in the middle", served as a buffer between the managerial organization and the shop floor, in Japan the foreman was an integrator of managerial and shop-floor learning. From the late 19th century, a prime objective of US managerial learning had been to develop machine technologies that could dispense with the skills of craft workers. In contrast, with an accumulation of such craft skills lacking in Japan, the problem that had confronted technology-oriented managers from the Meiji era had been to develop skills on the shop floor as part of a strategy of organizational learning that integrated the capabilities of managers and workers.

The rise of enterprise unions in the early 1950s both reflected and enhanced the social foundations for the hierarchical integration of shop-floor workers. During the last half of the 1940s, dire economic conditions and democratization initiatives gave rise to a militant labor movement of white-collar (technical and administrative) and blue-collar (operative) employees. The goal of the new industrial unions was to implement "production control": the takeover of idle factories so that workers could put them into operation and earn a living. As an alternative to these militant industrial unions, leading companies created enterprise unions of white-collar and blue-collar employees. In 1950 under economic conditions rendered more severe by the occupation's anti-inflationary polices, companies such as Toyota, Toshiba, and Hitachi fired militant workers and offered enterprise unionism to the remaining employees. The post-Korean War recession of 1953 created another opportunity for more companies to expel the militants and introduce enterprise unionism.

Foremen and supervisors were members of the union, as were all university-educated personnel for at least the first 10 years of employment before they made the official transition into "management". Union officials, who were company employees, held regularly scheduled conferences with management at different levels of the enterprise to resolve issues concerning remuneration, work conditions, work organization, transfers, and production. The continued and rapid expansion of the Japanese economy in the high-growth era ensured that enterprise unionism would become an entrenched Japanese institution.

The most important achievement of enterprise unionism was "lifetime employment", a system of permanent employment that, while not contractually guaranteed, gave male white-collar and blue-collar workers employment security to the retirement age of, first, 55; from the 1980s, 60; and from the late 1990s at a growing number of companies, 65. This employment security both won the commitment of the workers to the company and gave the company the incentive to develop the productive capabilities of its workers. The system did not differ in principle from the organizational integration of professional, technical, and administrative employees that was at the heart of the US managerial revolution, except in one extremely important respect. Unlike the United States where there was a sharp segmentation between salaried managers and hourly workers, Japanese companies of the post-World War II decades extended permanent employment to both white-collar and blue-collar personnel, thus providing a foundation for the hierarchical integration of shop-floor workers into a company-wide process of organizational learning.

Top managers had ultimate control over strategic investments, and technical specialists designed products and processes, typically on the basis of foreign technology. But, given these managerial capabilities, the unique ability of Japanese companies to transform technology acquired from abroad to generate new standards of quality and cost depended on not only the abilities of their engineers but also the integration of shop-floor workers into organizational learning processes. Through their engagement in processes of cost reduction, Japanese shop-floor workers were continuously involved in a more general process of improvement of products and processes that, by the 1970s, enabled Japanese companies to emerge as world leaders in factory automation – by 1993 in the automobile industry the stock of robots per 10,000 production workers in Japanese factories was 3.8 times the US figure (UN/ECE, 2000). Also of great importance was the ability of Japanese manufacturers to eliminate waste in production; by the late 1970s, for example, Japan's competitive advantage in television sets was not in labor costs or even scale economies but in a savings of materials costs. This productive transformation became particularly important in international competition in the 1980s as Japanese wages approached the levels of the advanced industrial economies of North America and Western Europe and, especially from 1985, as the value of the yen dramatically strengthened. During the 1980s and 1990s, influenced by not only Japan's export performance but also the impact of Japanese direct investment in North America and Western Europe, many Western companies sought, with varying degrees of success, to implement Japanese high-quality, low-cost mass-production methods.

During the 1980s, most Western analyses of the sources of Japanese competitive advantage focused on the hierarchical integration of the shop-floor worker into the organizational learning process. By the early 1990s the emphasis shifted to the role of "cross-functional management", "company-wide quality control", or "concurrent engineering" in generating higher quality, lower cost products. The hierarchical integration of engineers with shop-floor workers fostered functional integration as specialized engineers engaged in teams to solve practical manufacturing problems.

Much of the discussion of functional integration focused on its role in "new product development" in international comparative perspective, with the US managerial corporation based on the Old Economy business model performing quite poorly in competition with the Japanese. The evolution of the semiconductor industry provides a vivid example of the competitive power, but also possibly the limits, of Japanese organizational integration. From the late 1970s the Japanese mounted a formidable competitive

challenge to US producers in dynamic random access memory (DRAM) chips, forcing most US companies, including Intel, to withdraw from the market after 1985. Already a powerhouse in semiconductors before the Japanese challenge, Intel re-emerged even stronger in the 1990s as the leader in microprocessors, a product in which it was the pioneer in the early 1970s and for which during the 1980s it secured the franchise for the IBM PC and the subsequent IBM clones.

Organizational integration was critical to the Japanese challenge in DRAMs. In a comparative study of Japanese and US semiconductor manufacturing Daniel Okimoto and Yoshio Nishi (1994, p. 193) argued that "[p]erhaps the most striking feature of Japanese R&D in the semiconductor industry is the extraordinary degree of communication and 'body contact' that takes place at the various juncture and intersection points in the R&D processes – from basic research to advanced development, from advanced development to new product design, from new product design to new process technology, from new process technology to factory-site manufacturing, from manufacturing to marketing, and from marketing to servicing." They contrasted the organization of Japanese semiconductor manufacturing with that in the United States, where design engineers had the glamour jobs and manufacturing engineers were viewed as "second-class citizens".

Value added in microprocessors is in product design that determines the use of the product. Value added in memory chips is in process engineering that reduces defects and increases chip yields. By the 1980s, Japanese companies such as Fujitsu, Hitachi, and NEC were able to achieve yields that were 40 percent higher than the best US companies. Central to this advantage was the development of advanced semiconductor manufacturing technology, itself the result of the organizational integration of engineers into manufacturing activities and interactive learning with equipment suppliers. In 1987, fearful that it would become totally dependent on the Japanese for semiconductor manufacturing equipment, the US Semiconductor Industry Association launched the manufacturing technology research consortium, Sematech, with support from the US Department of Defense and exemption from the antitrust laws on the grounds that national security was at risk.

More generally, and contrary to conventional wisdom, in terms of support for technology development, it was the United States government, not the Japanese government, that was the more formidable "developmental state". Indeed, as I elaborate below, the US New Economy business model, of which a Silicon Valley company such as Intel is an exemplar, would never have emerged without massive government investments in the post-World War II decades in the electronics industry. In contrast, it was in the realm of finance,

not technology, that the Japanese state played a developmental role by structuring the banking system as an investment institution to fund the high-speed growth of industrial enterprises during the postwar decades. While stable shareholding gave corporate managers strategic control over the allocation of corporate revenues in the post-World War II decades, even with low payout ratios corporate retentions were grossly insufficient to finance the capital requirements of Japanese companies in the era of high-speed growth. Using retentions as a foundation, most of the financial commitment of Japanese companies came from bank loans, with the companies' debt-equity ratios often at 3:1 and at times higher. In borrowing these funds, each major industrial company had a "main bank" whose job it was to convince other banks to join it in making loans to the company and to take the lead in restructuring its client company should it fall into financial distress.

During the 1980s many economists both in Japan and the West who looked to agency theory to understand the Japanese firm, incorrectly identified the "main bank system" as *the* central institution of corporate governance (see Aoki & Patrick, 1994). They contended that the main bank system enabled financial interests as principals – in the Japanese case the banks rather than shareholders – to monitor the behavior of managers as agents. In funding the growth of Japanese companies, however, the Japanese banks were relatively passive agents of government development policy, with "overloans" being made by the Bank of Japan to its member banks for providing highly leveraged finance to growing industrial companies. The Japanese banks never had any significant capabilities to monitor these companies, as evidenced by the their rush to make speculative loans during the Bubble Economy of the late 1980s and their persistent bad-debt burdens since the bubble burst in 1990. Japanese banks, that is, played a critical role in providing financial commitment, but no significant role in the exercise of strategic control.[8]

What then ensured that the top executives of Japanese companies would exercise strategic control for the benefit of their companies rather than for their own personal gain? It was not the board of directors, which in Japan was almost entirely made up of inside executives, and indeed functioned more as a body for bestowing honorific positions on ageing top managers than for corporate decision-making or oversight. As in the US Old Economy model at its innovative peak, the behavior of Japanese top managers was regulated by the cohesive organizations over which they presided, and in particular by the institution of permanent employment with the responsibility for maintaining the competitiveness of the company that it entailed. Over time, norms of corporate behavior evolved in Japan that no top

executive could defy. Even though permanent employment is not a contractual relation at the level of the firm, under the "doctrine of abusive dismissal", courts have demanded that employers demonstrate, subject to strict criteria, "a business need" for layoffs, and in the last half of the 1990s judges ruled that dismissals were unjustified in 80 percent of the cases brought before them (Ouchi, 2002). By way of contrast, in the late 1980s, in the wake of a rash of corporate downsizings, the US labor movement had to wage a difficult, but ultimately successful, battle to get the US Congress to pass a law requiring a company to give workers in plants with 100 or more employees 60-days' notice that the facility was going to be closed.

5. VARIETIES OF WESTERN EUROPEAN CAPITALISM

5.1. The British Model[9]

While the power of the US Old Economy business model declined during the last two decades of the 20th century, it occupied a position of global dominance in the post-World War II decades. The innovative power of the US Old Economy model was particularly evident when placed in competition with the much more hierarchically and functionally segmented business model that prevailed in Britain. Coming into the 20th century, Britain had been the world leader in GDP per capita before it was surpassed by the United States. In 1932–1935 and also in 1938, with the US mired in the Great Depression, Britain once again emerged briefly with the world's highest GDP per capita, and then (among the large advanced economies) remained second to the US until the late 1960s when it was overtaken first by France and then, in some years, by Western Germany, Italy, and Japan. From the late 1960s to the present Britain's GDP per capita has been about 70 percent of that of the United States (Maddison, 2004).

As an industrial nation that has been the "workshop of the world" in an era of proprietary capitalism, Britain was slow to make the transition to managerial capitalism. Although coming into the post-World War II period, Britain had a presence in all of the major consumer and capital goods industries, ranging from steel to cars and from machine tools to electronics, its companies generally failed to remain competitive in global markets. As depicted in Fig. 4, a prime reason was the organizational segmentation that characterized the British business model. Top executives of major British companies tended to be segmented from the rest of the organization,

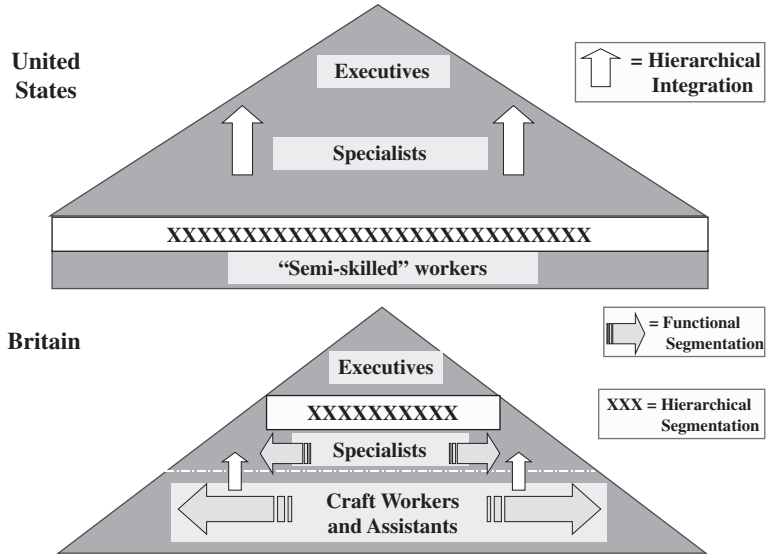

Fig. 4. US Old Economy and British Business Models Compared.

and technical specialists tended to be functionally segmented from one another.

The hierarchical segmentation of top executives hampered their ability to invest in organizational capabilities in response to innovative challenges. The historical origins of this segmentation can be found in the interaction between the control of British industrial enterprises and the structure of British society during the first half of the 20th century. Families retained control of British firms, and yet, as leading industrialists, they did not constitute an elite social class that could reshape Britain's economic institutions to support the new requirements of innovative enterprise. British industrialists of the late 19th and early 20th centuries were generally middle class, with their home bases in the industrial districts of the Midlands and the North. Large accumulations of wealth in Britain were in the hands not of these industrialists but of financiers based in the City of London. Using upper-class educational institutions as means of entry and marriages as instruments of merger, wealthy financiers joined with the old landowning elite (many of them grown recently wealthy through rising land values) to form a new aristocracy. The wealth of this restructured upper class was not, as was increasingly the case in the United States and Germany, based on the application of science to industry and the resultant profits from technological innovation. Rather, the bases of wealth in financial activities were

social connections and acquired reputations. Hence the importance for ultimate economic success of family connections and associations made at elite educational institutions – the ancient universities of Oxford and Cambridge as well as public schools such as Eton and Harrow.

Lacking industrial roots, the aristocracy who controlled these elite institutions during the era of the second industrial revolution had no need for an educational system that developed technologists. They valued the study of science as a branch of sophisticated knowledge but had no interest in its application to industry. Indeed they positively resisted the notion that a concern with technology had any place in an elite education; its function was to set them apart from middle-class industrialists, not to bring them in closer contact with them. By the same token, successful industrialists who accumulated sufficient fortunes to join Britain's upper class had little interest in challenging the anti-technology bias of Britain's elite educational system. As individuals, they wanted to elevate their social standing, not transform British social institutions. As Donald Coleman (1973) put it in a well-known essay, successful British industrialists sought to become "gentlemen" rather than "players".

In seeking to move up the social hierarchy, successful industrialists did not abandon industry for finance; barriers to entry into finance and related pursuits were high precisely because of the centrality of social connections and reputation to the success of the financial enterprise. Rather control over an established industrial enterprise remained the foundation of their material wealth and the most assured means of passing it on to their heirs. Throughout the first half of the 20th century, they handed control over their businesses to their sons and sons-in-law, thus perpetuating the relation between ownership and control. In many industries, mergers among family firms led to a decline of the ownership stake of any single family in major British companies. Now, however, an amalgam of family firms, each with its own minority stake, occupied, and in effect divided, positions of strategic control in these companies, as family members continued to dominate the boards, including executive director positions. In an era in which the "managerial revolution" professionalized positions of strategic control in not only in the United States but also Germany and Japan, the managers of major British enterprises remained by almost all accounts amateurs.

The larger owner-controlled firms that had to go beyond family members to recruit higher-level managers gave preference to graduates of Oxbridge. A study of the career mobility of British industrial managers done in the mid-1950s found that the most advantageous educational qualification was an arts degree from Oxford or Cambridge (Action Society Trust, 1956,

pp. 8, 128). By the 1960s, the emphasis had turned toward science degrees from the elite universities. But scientists and engineers from provincial universities remained second-class citizens within industrial enterprises, with little if any prospect of rising from the specialist to executive level.[10] Given this hierarchical segmentation, societies of chemical and electrical engineers set their own qualifications for university graduates to enter their professions. In contrast, in the United States corporate involvement with the university system itself set the professional standards for these specialists. The result in Britain was a functional segmentation among technical specialists that impeded organizational learning within enterprises.

The problem of functional segmentation extended to the shop floor where craft workers jealousy guarded their realms of craft control. In machine-based industries there was some hierarchical mobility of craft workers to specialist positions, but this mobility only served to reinforce the hierarchical segmentation of craft control from corporate control and functional segmentation among technical specialists. These shop-floor workers were more highly skilled than their US counterparts, but they used these skills to preserve their craft prerogatives embodied in "custom and practice". Meanwhile, given the weakness of British managerial organization, those who exercised strategic control over British industrial firms made little attempt to develop shop-floor skills as part of an innovative investment strategy, as was being done for example in Germany and Japan. Recognizing the barriers that craft demarcations posed to raising productivity, during the 1960s many companies sought to reorganize their production processes by granting wage increases to groups of workers in exchange for the elimination of craft rules. Studies of these experiments in "productivity bargaining" found that the result was often a proliferation of *new* craft rules created by groups of workers who would then agree to drop these rules in exchange for higher pay.

This segmented structure of business organization remained in place in Britain during the post-World War II decades. In the 1950s and 1960s, a hostile takeover movement as well as nationalizations challenged the persistence of family control. As a defense against takeover, incumbent managers often increased dividend payments, while in the aftermath of a successful takeover, new management often did the same. One result was that, notwithstanding the relatively poor performance of British industrial companies, their dividend payout ratios were high relative to those in other developed nations, including the United States. Indeed, in the 1950s and 1960s, relatively high dividend yields induced institutional investors such as pension funds and insurance companies to allocate considerable proportions

of their portfolios to corporate equities. Britain's financial community, centered in the City of London, remained much more concerned with reaping the returns from the investments that British business corporations had made in the past than with providing these companies with financial commitment for innovative investment strategies that could generate new sources of returns in the future.

Government monetary policies during the Thatcher era of the 1980s pushed British industry to the wall, and thus helped to resolve its competitive shortcomings by forcing many firms organized along the British model to shut down. Subsequently, Japanese and Korean companies revived the British industrial base by setting up plants in Britain to serve as platforms for exports to European markets. Run according to distinctive business models imported from their own countries, these foreign direct investments have enjoyed considerable success, in the process helping to bring modern management methods to Britain.

5.2. The German Model[11]

As depicted in Fig. 5, the German model that evolved in the decades after World War II was characterized by a high degree of hierarchical integration,

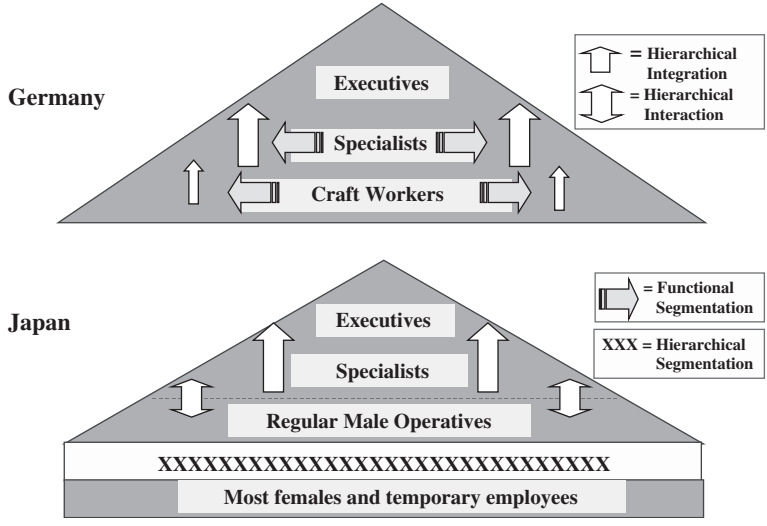

Fig. 5. German and Japanese Business Models Compared.

but considerable functional segmentation. The top executives of high-tech German firms are generally scientists or engineers who acquired their positions through careers within the company. They develop and implement their enterprise strategies through managing boards (*Vorstand*) made up of inside executives, while these strategies must gain the approval of supervisory boards (*Aufsichsräte*). Since the early 1950s, German companies have been governed by a system of codetermination (*Mitbestimmung*) that includes employee representation on the supervisory board as well as the right to elect work councils (*Betriebsäte*) to engage management at the enterprise and plant levels. In companies with more than 2000 employees, the seats on the supervisory board are shared equally between shareholder and worker representatives, with the chairman of the board being a shareholder representative who can exercise a tie-breaking vote. Employees exert more direct, and arguably greater, influence over a company's investment activities through works councils, which participate in decisions related to issues of remuneration, work conditions, and labor allocation, and have the right to receive information concerning the firm's investment strategy and financial condition.

In German companies, both shop-floor and managerial employees are well-educated and trained, with entry into the world of employment typically being via a three-year "dual apprenticeship system" through which workers receive a combination of formal education and on-the-job training in a particular specialization. This skill-formation system is controlled at the regional level through the collaboration of employer and employee associations as well as relevant government ministries. Larger employers contribute disproportionately to funding the apprenticeships, thus in effect subsidizing the training of employees for regional small and medium sized firms.

A great strength of German industry in the post-World War decades was the regional accumulation of skilled labor that supported symbiotic production in enterprises of different sizes, so that the ability to produce high-quality goods resided in both large managerial corporations and the smaller *Mittelstand* within the regional economy. A prime example of such a region was Baden-Württemburg, home to companies such as Robert Bosch, the Mercedes division of Daimler-Benz, and Porsche, and with a *Mittelstand* sector that focuses on engineering and metalworking, especially for the automobile industry. The leading firms in the regions played an important role in structuring the innovative contributions of medium-sized suppliers, while collective support for regional innovation came from financial and technology institutions organized by regional and municipal governments, nonprofit organizations, and business associations.

As a result of its governance and employment institutions, German production workers have possessed high levels of skill. In developing and utilizing these skills over the course of their careers, even shop-floor employees often have had the opportunity of moving up the company hierarchy through their area of specialization into the managerial ranks. Thus one has found in German companies a high degree of hierarchical integration of employees within an area of specialization, a mode in integration that is conducive to the production of high quality, even if high cost, products. During the post-World War II decades, this mode of organizational integration, which differed markedly from the US system of hierarchical segmentation between managers and workers, provided the foundation for Germany's global leadership in high-quality manufacturing.

By relying on career-long functional specialization as a mode of hierarchical integration, however, the German business model fostered functional segmentation that left its mechanical and electrical engineering companies vulnerable to competitive challenges from more organizationally integrated rivals. In the first half of the 1990s, the Japanese were able to build on their advances in process innovation in the automobile and machine tool industries to move from the lower ends of the markets, in which they had already confronted US hegemony in mass production, into higher quality luxury car and precision machine tool markets where they matched the Germans in quality and beat them in cost (see Fig. 5). The result was, in 1993–1994, a crisis in these sectors in Germany, with dramatic reductions in employment and attempts, with some success, to learn from the Japanese. At the same time, however, Germany was burdened by the need to integrate East Germany, whose industry possessed far less productivity, into the unified nation.

In both developing its productive capabilities and responding to these challenges, West German firms had secure control over their internal revenues, which formed the foundation of their financial commitment. The institutional foundations for that financial commitment went back to the late 19th century when the "Great Banks" had functioned as venture capitalists to German industry. The banks lent money to promising industrial firms and then, if and when these firms were well-established, floated "bearer" shares in the firms among wealthy bank customers in order to enable the firms to pay back the bank loans. These bank customers in turn deposited the shares with the banks that then became the "bearers" of these shares with the right to exercise the votes attached to them. In this way, the banks continued both to fund the growth of German firms and to protect them from outsiders who might try to lay claim to corporate revenues.

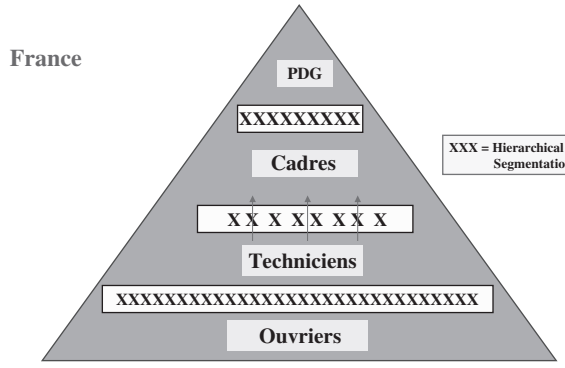

Fig. 6. The French Business Model.

The banks have exercised this protective role and kept themselves informed on the investment strategies of the companies concerned by having members on their supervisory boards. Nevertheless, compared with the high debt-equity ratios that characterized Japanese industrial enterprises in their era of high-speed growth, German firms have been able and willing to grow with much more conservative debt burdens, making them much less dependent on bank borrowing than their Japanese competitors.

5.3. The French Model[12]

The case of France provides yet another distinctive "variety of capitalism" characterized by unique social conditions of innovative enterprise (see Fig. 6). Of all of the major developed economies, the economic development of France was, in the last half of the 20th century, the most explicitly state-led. In the decades after World War II France constructed a national innovation system based on national research laboratories (*CNRS – Centre Nationale de Recherche Scientifique*) and the state championing of a number of industrial corporations capable of transforming that research into military and commercial products. In particular, state-led efforts focused on the aeronautics, electronics, nuclear, space, and telecommunications sectors, with military expenditure playing an extremely important role.

Linking the state sector and the industrial firms has been a power elite, deliberately and openly created by the state, whose origins can be traced back to the Napoleonic era. At an early age through a national competition, the future leaders of French government and business gain admission to one

of the *grandes écoles*, most notably *Ecole Polytechnique* for engineers and *Ecole National d'Administration* (ENA) for managers. Within their broad areas of specialization, these elite students subsequently enter the labor force as members of a *grand corps* through which they maintain links with one another over the course of their careers. Engineers may enter industry directly but many Polytechniciens and Enarques spend the first portion of their careers in the civil service before entering, through a process known as *pantouflage*, business enterprises as high-level executives. In 1990, 45 percent of the *PDGs* (*Président-directeur générals*) of 200 largest French corporations had come through this system.

The existence of this power elite was critical in aligning business-government relations in the massive restructuring of high-tech industry that was undertaken by the French state in the 1980s and early 1990s. The Mitterand nationalization program in 1982–1983 led to massive amounts of public funds being invested in the modernization of a number of capital-intensive, high-technology companies, including, among others, Compagnie Générale d'Electricité in electrical equipment, Rhône-Poulenc in chemicals, Saint-Gobain-Pont à Mousson in glass, paper, and metals, and the combination of Sacilor and Usinor in steel. With the government typically assuming 100 percent ownership and with members of the *grand corps* in key executive positions, the state exercised strategic control and provided financial commitment to restructure these nationalized companies to compete globally.

Subsequently, beginning in 1986, a number of the nationalized companies were privatized. To ensure that strategic decision-making in the privatized firms would remain under the control of the French elite, French companies agreed to enter into a system of cross-shareholding that created a *noyau dur* (hard core) of stable shareholders. Although in the late 1990s, as discussed below, there was considerable unraveling of this cross-shareholding, the system of recruiting top executives of major French companies remains intact. That system also means, however, that, as depicted in Fig. 6, there is a segmentation in terms of organizational learning between these top executives and the rest of the business organization. As Patrick Fridenson (1997, pp. 219–220) has put it: ''Most French top managers have no direct experience of shared work with either other managers or workers''. Given their elite positions, however, these top executives tend to be mission-oriented, giving employees a clear understanding of the objectives of the enterprise and an assurance that the resources will be mobilized to carry out those goals. It is for this reason that French companies have been particularly innovative in carrying out large-scale complex projects in areas such as transportation and communication.

Given the way in which top managers of French industrial enterprises have been recruited, the middle managers, or *cadres*, who design a company's products and oversee its operations, have little if any possibility of rising to the top of the companies in which they pursue their careers. In the high-tech sector, these middle managers tend to have engineering degrees with a theoretical orientation toward solving problems within well-defined systems. Below the *cadres* in the enterprise hierarchy are *techniciens*, whose education (a two-year technician diploma) and experience enable them to solve practical industrial problems, and who have traditionally had little opportunity for upward mobility to the cadre ranks (although channels for movement up the hierarchy opened somewhat in the 1990s).

Segmented from the *techniciens* are semi-skilled and unskilled production workers, or *ouvriers*. France entered the post-World War II decades with a domestic population that was still rural and with a large colonial presence. As French industry expanded in the postwar decades, it drew upon this unskilled labor force for shop-floor work. These workers had a low level of unionization, but were often very militant. One mode of stemming this militancy was the granting of wage concessions. In his study of the evolution of the car manufacturer, Renault, during the post-World War II decades, Michel Freyssenet (1998, p. 374) shows how, in response to shop-floor conflict, between about 1980 and 1990, "unskilled" workers disappeared from Renault plants as they were reclassified as "skilled" workers, even without any change in the content of their work, so that they could qualify for higher wages. In the corporate restructuring of the 1980s and 1990s, early retirement schemes, funded by the government, eased a large proportion of these workers out of the labor force. More recently, the numbers of shop-floor workers has been further reduced in the major corporations through outsourcing. At the same time, these companies have been upgrading the skills of younger workers, supported by a concerted state effort to increase the proportion of the school-age population who receive the *baccalauréat*, the certificate that permits high-school graduates to continue in higher education.

As for financial commitment, among the advanced economies France has perhaps the most explicitly state-backed system of bank finance of industrial enterprises. As already mentioned, in the 1980s the state took critical enterprises that needed restructuring under its direct ownership and control, and then financed that restructuring as a prelude to reprivatizing these companies on a more globally competitive basis. The fact that the unraveling of the cross-shareholdings of these privatized corporations in the last half of the 1990s resulted in foreign institutional investors buying up significant amounts of shares of French companies led some observers to argue

that French companies have become dependent on foreign capital, with a consequent loss of strategic control (see Goyer, 2001; Hancké, 2001, p. 330). But, as research by O'Sullivan (2006) has shown, the influx of foreign investors was in response to an ebullient stock market, in part fostered by the willingness of the French corporate elite to permit a more widespread distribution of their companies' shares. French corporations took advantage of the rising stock market to use their stock as a currency to acquire foreign companies as part of strategy of global expansion. In some cases, the stock was used directly as the acquisition currency; for example, in the United States where many of the acquisitions were done using American Depository Receipts (ADRs) that permitted the acquired companies to be paid in a stock-based currency denominated in US dollars, while in other cases, the rising stock market facilitated the floating of convertible bonds for acquisition purposes. As O'Sullivan points out, the unraveling of cross-shareholdings left French companies more vulnerable to outside challenges to strategic control. These corporate strategies were not, however, dictated by a dependence on global capital markets for finance. Rather French companies pursued these strategies to increase their presence in the global economy by making use of capital markets, both in France and abroad, toward that end.

6. THE RISE OF THE US NEW ECONOMY BUSINESS MODEL[13]

During the 1970s and 1980s, while Japanese enterprises were challenging established US managerial corporations in many industries in which they had been dominant, there was a resurgence of the US information and communications technology (ICT) industries, providing the foundation for what by the last half of the 1990s became known as the "New Economy". Historically, underlying the emergence of the New Economy were massive post-World War II investments by the US government, in collaboration with research universities and industrial corporations, in developing computer and communications technologies.

By the end of the 1950s, this combined business-government investment effort had resulted in not only the first generation of computers, with IBM as the leading firm, but also the capability of imbedding integrated electronic circuits in a silicon chip, with Fairchild Semiconductor and Texas Instruments in the forefront of creating the technology that would become the standard of the semiconductor industry. Through the early 1960s the US

government provided virtually all of the demand for integrated circuits. From the second half of the 1960s, however, a growing array of commercial opportunities for electronic chips induced the creation of semiconductor startups. A new breed of venture capitalist, many with prior managerial or technical experience in the semiconductor industry, backed so many semiconductor startups clustered in the region around Stanford University that by the early 1970s the district was dubbed "Silicon Valley". Innovation in semiconductors, and especially the development of the microprocessor – in effect a computer on a chip – created the basis for the emergence of the microcomputer industry from the late 1970s, which in turn resulted in the enormous growth of an installed base of powerful "hosts" in homes and offices that made possible the Internet revolution of the 1990s.

Intense, and often informal, learning networks that transcended the boundaries of firms contributed to the success of Silicon Valley. Like the British industrial districts that Alfred Marshall (1920, Book IV, Ch. X) had described a century earlier, there is no doubt that, in Silicon Valley, "the mysteries of the trade … were in the air". But in its strategy, organization, and finance, the New Economy business model (see Fig. 7) that emerged in Silicon Valley differed significantly from the Marshallian industrial district. Those who have exercised strategic control have been professional managers, typically with engineering backgrounds. Organizational learning occurred across firms, as AnnaLee Saxenian (1994) has stressed, but it also, and I would argue more fundamentally, occurred within firms that integrated skill bases of highly educated personnel, enabling some particularly

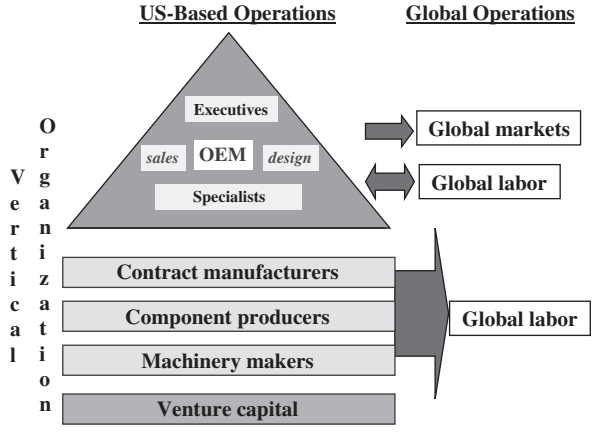

Fig. 7. The US New Economy Business Model.

innovative enterprises such as Hewlett-Packard, Intel, Sun Microsystems, Oracle, and Cisco Systems that grew to employ tens of thousands of employees to drive the development of the region.

In 2003, the top 500 US-based companies by sales included 20 ICT firms founded no earlier than 1959 that had been neither spun off from nor merged with an Old Economy firm. These 20 companies had revenues ranging from $41.4 billion for Dell Computer to $3.4 billion for Gateway, with an average of $11.9 billion. Their headcounts ranged from 79,700 for Intel to 7,400 for Gateway, with an average of 35,100. Nine of these 20 companies were based in Silicon Valley, another 2 in Southern California, and the other 9 in 8 states around the United States.

Innovative New Economy companies have tended to grow large by upgrading and expanding their product offerings within their main lines of business, and thus far at least have not engaged in the indiscriminate diversification into unrelated technologies and markets that characterized, and ultimately undermined the performance of, many leading Old Economy companies in the 1960s and 1970s. At the same time, New Economy companies have become less vertically integrated than Old Economy companies because equipment manufacturers such as Cisco, Dell, and Sun Microsystems have focused their investment strategies on activities that require organizational learning in their core competencies, while outsourcing activities that, as is the case with semiconductor fabrication, are too expensive and complex to be done in-house, or, alternatively, as is the case with printed circuit board assembly, have become routine.

Some of the largest ICT companies in the United States are upstream electronics components suppliers, most of which, in terms of the social conditions of innovative enterprise, can be classified as New Economy firms. The world's five largest contract manufacturers – Flextronics, Solectron, Sanmina-SCI, Celestica, and Jabil Circuit – to whom equipment manufacturers outsource the mass production of printed circuit boards and other components, employed a total of 260,000 people at the end of 2005. A main competitive advantage of the leading contract manufacturers is their ability to relocate production processes that have become cost-sensitive and routine to lower wage global locations. Indeed, in the 1960s and 1970s, well before the rise of the contract manufacturers as an outsourcing option for OEMs, growing Silicon Valley companies took the lead in offshoring more routine production processes, especially to Asia.

While strategy and learning remained centered in the United States, the New Economy business model was able to tap into a global labor supply. During the 1980s and 1990s growing numbers of foreigners, especially from

Asia, obtained graduate degrees in science and technology from US universities, and then entered the US labor force, often obtaining immigrant status as permanent residents. Additionally, during the 1990s large numbers of foreigners gained production experience in US high-technology industries under non-immigrant visa programs. The H-1B program enables a non-immigrant whose skills are purportedly unavailable in the United States and has at least a bachelor's degree to work in the United States for up to six years. Seventy percent of H-1B visa holders have science or technology degrees, and two-fifths to one half in any given year in the 2000s have come from India (the next largest national group is from China, at less than 10 percent). The L-1 visa program permits a company with operations in the United States to transfer foreign employees to the United States to acquire work experience for 5 to 7 years. In the 2000s Indians have dominated the L-1 visa category. In 2001, there were an estimated 1.5 million well-educated non-immigrants on H-1B and L-1 visas working in the United States. Many have remained in the United States by obtaining permanent resident status, but most have returned to their native countries with valuable industrial experience that can be used to start new firms and, more typically, to work as technical specialists for indigenous or foreign companies. The availability of this highly educated and experienced global labor supply has facilitated a step increase in the 2000s in offshoring by US ICT companies to Asia, especially to India and China. These offshored activities increasingly require not only routine work but also organizational learning that was previously only carried out in the United States.

Within the United States, however, new firm creation remains important in high-tech industries, with much of it backed by venture capital. Through its success in funding high-tech startups in Silicon Valley from the 1960s, venture capital evolved into an industry in its own right with Silicon Valley remaining the most important location for venture-backed firms. The founders of New Economy startups have typically been engineers who have gained specialized experience in existing firms, although in some cases they have been university faculty members intent on commercializing their academic knowledge. While some of these entrepreneurs have come from existing Old Economy companies, where it was often difficult for their new ideas to get internal backing, New Economy companies themselves became increasingly important as sources of new entrepreneurs who left their current employers to start new firms.

Typically, the founding entrepreneurs of a New Economy startup sought committed finance from venture capitalists with whom they shared not only ownership of the company but also strategic control. Besides sitting on the

board of directors of the new company, the venture capitalists would generally recruit professional managers, who would be given company stock along with stock options, to lead the transformation of the firm from a new venture to a going concern. This stock-based compensation gave these managers a powerful financial incentive to develop the innovative capabilities of the company to the point where it could do an IPO or private sale to an established company. But, both before and after making this transition, their tenure with, and value to, the company depended on their managerial capabilities, not their fractional ownership stakes.

Key to making this transition from new venture to going concern is the organizational integration of an expanding body of technical and managerial "talent". What came to be known as "broad-based" employee stock option plans became an important mode of compensation, usually as a partial substitute for cash salaries, for a startup to attract these highly mobile people and then retain their services so they could contribute to the firm's learning processes. The underlying stock would become valuable if and when the startup did an IPO or private sale to a publicly listed company, thus enabling the startup's privately held shares to be transformed into publicly traded shares. Shortening the expected period between the launch of a company and an IPO was the practice of most venture-backed high-tech startups of going public on the NASDAQ electronic exchange (founded in 1971 by the National Association of Securities Dealers to provide automated stock quotations for stocks traded over-the-counter), with its much less stringent listing requirements than the Old Economy New York Stock Exchange. If and when the firm did an IPO or was acquired by another publicly listed company, the venture capitalists could sell their shareholdings on the stock market, thereby exiting from their investments in the firm, while entrepreneurs could also transform some or all of their ownership stakes into cash. With the company's stock being publicly traded, employees who exercised their stock options could easily turn their shares into cash.

During the 1980s and 1990s the liberal use of stock as a compensation currency, not only for top executives as had been the case in Old Economy companies since the 1950s, but also for a broad base of non-executive personnel became a distinctive feature of New Economy firms. For example, Cisco Systems, which grew from about 200 employees at the time of its IPO in 1990 to 38,000 employees in 2001, as it became the dominant firm in the Internet equipment market, awarded stock options to all of its employees, so that by 2001 stock options outstanding accounted for over 14 percent of the company's total stock outstanding. Since Cisco outsourced almost all of its

manufacturing, the people in the skill base to whom these options were awarded were almost all highly educated employees who were potentially highly mobile on the labor market.

Besides using their own stock as a compensation currency, during the 1990s some New Economy companies grew large by using their stock, instead of cash, to acquire other, smaller and typically younger, New Economy firms in order to gain access to new technologies and markets. Cisco mastered this growth-through-acquisition strategy. From 1993 through 2003 Cisco made 82 acquisitions valued in nominal terms at $39.2 billion, of which over 98 percent was paid in the company's stock rather than cash. In 1999 and 2000 alone, Cisco did 41 acquisitions for $26.7 billion, with over 99 percent paid in stock.

At the same time Cisco conserved cash by paying no dividends, a mode of financial commitment that also distinguished New Economy from Old Economy companies. As a result, Cisco's astonishing growth in the 1990s occurred without the company taking on any long-term debt. Nevertheless, with the bursting of the New Economy bubble from mid-2000, Cisco, like many other successful New Economy companies that use their own stock as a combination and compensation currency, spent billions of dollars repurchasing its own stock to support its sagging stock price. Even during the boom, when stock prices were rising, the extent to which New Economy companies issued stock to make acquisitions and compensate employees meant that some of them spent billions of dollars on stock repurchases. For example, from 1997 through 2000 Intel repurchased $18.8 billion of its own stock while paying out $1.2 billion in dividends, and Microsoft repurchased $13.4 billion while paying out $800,000 in dividends. By way of comparison, R&D spending over these same four years was $14.2 billion at Intel and $11.2 billion at Microsoft. From 2001 through 2005, to support their sagging stock prices and offset dilution from the exercise of stock options, Intel repurchased $30.2 billion of its own stock; Microsoft, $31.4 billion; and Cisco, $27.2 billion (including $10.2 billion in 2005 alone). Joining these New Economy companies in this repurchase binge, with $22.7 billion spent in 2001–2005, was IBM, the pre-eminent Old Economy information technology company that during the 1990s had successfully adopted the New Economy business model.

One can argue, as New Economy executives do, that the repurchase of stock supports the innovation process; by boosting a company's stock price, repurchases give a high-growth company like Cisco a more valuable private "currency" with which both to acquire smaller technology companies, using stock instead of cash, and to reward employees through stock option

awards. In recent years, however, many New Economy companies, including Cisco, have used cash rather than stock to make acquisitions. In the 2000s, moreover, the gains from exercising stock options are going even more disproportionately to a company's top executives than to average employees than they were in the 1990s. At Cisco, for example, the five highest paid executives *each* reaped an *annual* average of $24.1 million in gains from the exercise of stock options in 1996–2000, and $8.8 million in 2001–2005. Excluding these returns to the five highest paid, Cisco employees each received an average of $151,000 per year from the exercise of stock option in 1996–2000 and $37,000 in 2001–2005. It may be that stock repurchases support the innovation process in a company like Cisco, but it is also clear that, for the sake of their own remuneration, top executives have a strong interest in stock repurchases, especially in a period such as the first half of the 2000s in which stock prices were much less supported by market speculation than they were in the last half of the 1990s. More generally, whatever the other possible benefits of a company's stock market performance, the massive gains that top executives reap from the exercise of stock options can easily explain their obsession with their company's stock price, manifested by their willingness to allocate hundreds of millions or even billions of corporate dollars per year to the repurchase of corporate stock.

In their discussion of the United States as a "liberal market economy", Hall and Soskice (2001, pp. 27–29) argue that corporate executives of US companies focus on stock-price performance because of the fear of hostile takeover via the "market for corporate control". This phenomenon was a prominent corporate governance issue in the 1980s as part of the restructuring of Old Economy companies, many of which had grown too large or had lost out in competition to foreign competition. Hostile takeovers, and the corporate raiders that perpetrate them, are, however, extremely rare in the New Economy business model. In New Economy firms, the ideology of "maximizing shareholder value" is driven by the interests of incumbent managers whose own pay depends on stock options, and who have also grown accustomed to the use of stock as a combination and compensation currency (Lazonick & O'Sullivan, 2000a; Carpenter et al., 2003). Note that in general New Economy companies do not depend on the stock market to supply their companies with cash. On the contrary, with their massive stock repurchases, New Economy executives supply cash to the stock market in an effort to support – one could even say manipulate – their company's stock price.

Along with their argument that in "liberal market economies" equity markets determine corporate investment behavior, Hall and Soskice (2001,

p. 31) also posit that highly fluid labor markets determine the access of firms to innovative capabilities. They contend, for example, that "in large measure, [technology transfer] is secured through the movement of scientists and engineers from one company to another (or from research institutions to the private sector) that fluid labor market facilitate". Relatedly, they argue that markets in technology set industry-wide technology standards, facilitating the entry of new firms into an industry.

While fluid labor markets for high-tech personnel and industry-wide technology standards are prominent features of the New Economy business model, in historical perspective these markets in labor and technology are outcomes rather than causes of the success of innovative enterprise. Industry-wide technology standards, as distinct from the in-house proprietary standards that prevailed in the Old Economy, have made it both possible and often desirable for a high-tech company to recruit employees with work experience with other companies. Frequent changes in industry standards, moreover, create a bias on the part of companies toward the hiring of younger employees. It has, however, been leading enterprises, not markets, that have created these industry-wide standards. In the US information technology industries, the key firm in effecting this transition from in-house to industry-wide standards was IBM, a company that employed almost 400,000 people, when it moved into the microcomputer industry in the early 1980s. In making this strategic move, IBM gave the microprocessor franchise to Intel (founded in 1968) and the operating system franchise to Microsoft (founded in 1975). By the end of the 1980s these two companies had set the industry standards. Cisco Systems (founded in 1984) played the same role in data-communication equipment, an industry in which it had a 75 percent market share by the late 1990s. In fiscal 2005 Intel had $38.8 billion in revenues in 2005 and employed 99,900 people; Microsoft had $39.8 billion and employed 61,000 people; and Cisco had $24.8 billion in revenues and employed 38,400 people.

Given industry-wide instead of in-house standards, in the 1990s IBM refashioned its R&D system and patenting activity to enhance its position in cross-licensing of technology with other firms. In the process IBM became by far the leading patentor in the United States. Over the past two decades IBM's competitive strategy has had far more influence on the creation of markets in technology than vice versa. To enhance its ability to gain access to industry-wide knowledge, in the early 1990s IBM deliberately rid itself of its renowned system of "lifelong employment" and successfully remade itself as a New Economy company that favored the recruitment of younger employees with experience with other companies rather than the career-long

retention of "organization men". In 2005, IBM had revenues of $91.1 billion and employed more than 329,000 people.

It was to lure scientists, engineers, and managers away from secure career employment with Old Economy companies such as IBM, AT&T, General Electric, and Hewlett-Packard that in the 1980s New Economy startups offered broad-based stock option plans. The point of these plans, and of the larger systems of compensation and promotion of which they were a part, was, however, not simply to attract "talent", but also to retain and tap the productive capabilities of these employees. The companies that were most successful in managing the fluid labor market for high-tech personnel were those that, having employed them, were able to integrate them into collective and cumulative learning processes. While an employee cannot hold out the expectation of career employment with an Intel, Microsoft, or Cisco, these high-growth companies nevertheless offer superior career-building opportunities to employees and have low rates of labor turnover. When, moreover, entrepreneurial employees leave these companies to form their own firms, they often do so not as competitors but by developing complementary products. Indeed such people may even be able to secure financial backing from the internal venture capital divisions of the companies that they have decided to leave. In short, an understanding of the dynamics of innovative enterprise is critical for understanding the dynamics of high-tech labor markets.

7. INNOVATIVE ENTERPRISE AND ECONOMIC DEVELOPMENT

In 1967 the French journalist, Jean-Jacques Servan-Schreiber's best-selling *Le Défi Américain* [The American Challenge] warned European nations of the need to unify to avert the dominance of their economies by US corporate power. In the same year, on the other side of the Atlantic, the US economist, John Kenneth Galbraith, published his best-selling *The New Industrial State*, in which he assumed that the prevailing US business model had achieved a degree of dominance that was impervious to external threat. Both Servan-Schreiber (1967) and Galbraith (1967) were acute observers of contemporary reality, whose books on US corporate power in the immediate post-World War decades deserved the wide readership that they achieved. Both books raised important questions about the relation between corporate governance institutions and economic development in the advanced economies. Neither book, however, provided an accurate guide to

the future of corporate governance and performance. Their authors did not foresee how the US business model that prevailed in the 1960s would itself be challenged in the decades to come, in part because of its own internal weaknesses and in part because of more powerful business models emanating from abroad. Neither author, for example, envisioned the impending rise of the Japanese as powerful corporate competitors, but in this oversight in the late 1960s they were hardly alone.

In historical retrospect, as outlined in this paper, we can now see that in the post-World War II decades there were a number of contending business models in the process of evolution in the developed national economies. During this postwar reconstruction period, corporations based in these different nations had, to a greater or lesser extent, privileged access to their growing domestic markets. Increasingly in the 1970s and 1980s, however, these different business models competed head-to-head on global markets, and by no means with equivalent capabilities. The distinctive social conditions of innovative enterprise that characterized these different business models go some way toward explaining national competitive performance in globalized industries such as automobiles, electronics, and machine tools circa 1980. In this competition, on the basis of the organizational capabilities that I have depicted in Figs. 3–7, Japan emerged as the *high-quality, low-cost* producer; Germany as the *high-quality, high-cost* producer; the United States as the *low-quality, low-cost* producer, and Britain as the *low-quality, high-cost* producer, with France somewhere in the middle of this group in terms of quality and cost (see Lazonick & O'Sullivan, 1996, 1997).

If only because of global competition, the business models that I have described in this paper have all undergone change, and we can expect that they will continue to do so. The deficiencies of the British business model, for example, meant that it did not in any significant way survive to the end of the 20th century, although that nation still copes with the governance, employment, and investment institutions that are a legacy of the past prevalence of a hierarchically and functionally segmented mode of internal organization. As I have also argued, the dominant US business model has undergone dramatic change; in 2005 one can argue that the evolution of the New Economy business model has had such a profound impact on US governance, employment, and investment institutions that the Old Economy business model, insofar as it exists, is an anachronism; a statement that for lack of understanding of the evolving New Economy business model and a (related) inability to foresee the future, I would not have made a decade ago notwithstanding the fact that I understood that the innovative capacity of the "Chandlerian" managerial enterprise was in decline (compare Lazonick, 1994, 2006a).

During the Internet boom of the late 1990s, when the notion of the "New Economy" came into vogue, the US business model, including the ideology of maximizing shareholder value, became attractive to policy-makers in the "social market economies" of Europe as well as in Japan (Lazonick, 1999; Lazonick & O'Sullivan, 2000b). Previously Europeans had associated the US Old Economy model with decline, manifested by relentless downsizing and growing income inequality. In contrast, they saw the New Economy model as a generator of innovation and development. There began to be talk about convergence of business models of the developed economies toward the US "ideal", by which what was generally meant was a business model governed by the principle of maximizing shareholder value.

Although infatuation with this mantra was short-lived in Japan (see Lazonick, 1999; Dore, 2000), it had staying power in Europe, even convincing some proponents of European social market institutions that US and British pension and mutual funds would starve European companies of investment capital if they failed to take immediate steps to boost their stock prices. As in the United States, many European executives imbibed the shareholder view of the world because they envied their US counterparts for their freedom of action in corporate restructuring and their rich rewards from stock-based compensation. Ultimately, European companies adapted certain elements of the New Economy business model such as (on a more constrained level than in the United States) stock-based compensation, the use of stock to acquire other companies (particularly in the French case), and outsourcing of routine activities (see Carpenter et al., 2003; Glimstedt, Lazonick, & Xie, 2006). In terms of the basic social conditions of innovative enterprise, however, the German, French, and Japanese business models have remained intact (see O'Sullivan, 2003, 2006; Lazonick, 2005).

Of critical performance to the ongoing development of all of these nations is the interaction between the innovative enterprise and the developmental state. An innovative enterprise develops productive resources to differentiate itself from its rivals, and utilizes the productive resources that it has developed to generate the higher quality, lower cost products that are the source of its competitive advantage. In doing so, the business enterprise makes economic development possible, but it does not necessarily act alone. Government investments in education and research form indispensable foundations for business investments in innovation. Governments may also serve as sources of demand for innovative products in their early stages of development when unit costs tend to be high. Governments may subsidize innovative enterprises directly when the returns to innovation remain so uncertain that business enterprises would not otherwise make the necessary

investments. Governments may protect national markets from foreign competition so that enterprises based in the nation can generate revenues, and stay in business, during the period of time that the cumulative innovation process is taking place. Some governments structure the banking system so that it provides the committed finance to businesses that is needed to sustain the innovation process until it can generate financial returns. In short, state subsidy and support is in virtually all places and at virtually all times integral to the innovation process.[14]

Besides supporting innovative enterprise in these ways, governments may also seek to ensure that the outcome of innovative enterprise is indeed economic development; that is, a process that raises the standards of living for more and more people over time. Left to itself innovative enterprise may generate economic growth, but in an inequitable and unstable manner that undermines its contribution to economic development. A challenge for those concerned with the relation between innovation and economic performance is to analyze how, historically and comparatively, governments have both supported innovative enterprise and influenced its outcomes to enhance the contribution of innovative enterprise to stable and equitable economic growth.

A theory of innovative enterprise is essential to the analysis of business-government relations in the development process. Otherwise one cannot explain why under some conditions government investments and subsidies are transformed into innovative outcomes while under other conditions they are not. One needs to embed such an explanation in an analysis of the "social conditions of innovative enterprise" – strategic control, organizational, commitment, and financial commitment – as they exist in different nations, in different industries, in different firms, and at different times.

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NOTES

1. Whitley (1999) delineates "varieties of capitalism" in terms of institutional differences across national business systems, but does not specifically analyze the

developmental implications of these different systems or the underlying social conditions of innovative enterprise. See also Whitley (2002) for a very useful edited collection of articles on "competing capitalisms".

2. There are extensive literatures on a wide range of topics that inform the characterizations of the various national business models presented below. Except where quoting directly or using specific data, rather than reference each particular argument throughout the text, for each business model I provide the reader with a list of the core references on which I have drawn (including previous papers of mine that in turn contain relevant bibliographic references). For the US Old Economy business model these references include Noble (1977), Mowery and Rosenberg (1989), Chandler (1990), Hughes (1990), Lazonick (1990, Chs. 7–10, 2002a, 2004a), Brody (1993), Rosenberg and Nelson (1994), Hounshell (1996), and O'Sullivan (2000a, Chs. 3–6).

3. Non-salaried employees were classified as "hourly" (or "non-exempt") workers because of the stipulation of the National Labor Relations Act that emerged from the New Deal era that required employees who were paid an hourly wage to receive 150 percent of that wage if they worked longer than the normal working hours. The overtime work of salaried personnel is exempt from this provision.

4. This section draws on Hadley (1970), Yonekawa (1984), Abegglen and Stalk (1985), Cusumano (1985), Gordon (1985), Dore (1986, 1987, 1990, 2000), Clark and Fujimoto (1991), Aoki and Dore (1994), Okimoto and Nishi (1994), Lazonick (1995, 1998, 1999, 2005), Sako and Sato (1997), and Morikawa (2001), as well as many references cited in these works.

5. These institutions are more generally called "cross-shareholding", "lifetime employment", and "the main bank system", respectively. For reasons that will be noted in this discussion, and which are elaborated in Lazonick (2005), these terms are misleading.

6. When in financial distress, a company might raise cash by selling some of its stable shareholdings to other companies at the going market price but with an understanding that the shares would be repurchased, also at the going market price, if and when its financial condition improved.

7. In March 2000 foreigners held 13.2 percent of outstanding shares, up from 4.2 percent in 1990 and 10.0 percent in 1998. By 2004 that share is said to have increased to about 18 percent, but since 2000, the Tokyo Stock Exchange, which beginning in 1949 had annually updated the series on shareholdings by type of holder, has not reported these figures. In terms of the value (as distinct from the number) of shares held, the proportion held by foreigners increased from 6 percent in 1992 to over 13 percent in 1998 to almost 24 percent in 2005 (Tokyo Stock Exchange, 2006, p. 60).

8. Hence my use of the more modest term "main bank lending" rather than the more grandiose term "main bank system" to describe this institution.

9. This section draws on Hannah (1983), Elbaum and Lazonick (1986), Sorge and Warner (1986), Lazonick (1986, 1990, Ch. 6), Daunton (1992), Chandler (1990), Walker (1993), Dore, Lazonick, and O'Sullivan (1999), Owen (1999), Coates (2002, Vol. III, Part II), Cheffins (2004), and Franks, Mayer, and Rossi (2004).

10. For an important exception that proves the rule (see Lazonick & Prencipe, 2005).

11. This section draws on Maurice, Sellier, and Silvestre (1986), Sorge and Warner (1986), Jürgens, Malsch, and Dohse (1993), Herrigel (1996), Streeck (1997), Cooke

and Morgan (1998, Ch. 4), Casper, Lehrer, and Soskice (1999), O'Sullivan (2000a, Chs. 7–8, 2003), Coates (2002, Vol. II, Part III), Jürgens, Lung, Volpato, and Frigant (2002), and Franck and Opitz (2003), as well as many references cited in these works.

12. Maurice et al. (1986), Chesnais (1993), Schmidt (1996), Boyer (1997), Fridenson (1997), Freyssenet (1998), Goyer (2001), Hancké (2001), Jürgens et al. (2002), Franck and Opitz (2003), and O'Sullivan (2003, 2006).

13. This section draws upon Lazonick (2006a, 2006b, 2006d), and references contained therein.

14. On the historical role of the US government in, to take a prime example, the development of computer industry, see Braun and MacDonald (1982), Flamm (1987, 1988), Leslie (1993), Mowery and Langlois (1996), Norberg and O'Neill (1996), National Research Council (1999), and Abbate (2000). For a perspective on the interaction of the innovative enterprise and the developmental state as a source of economic growth in the East Asian economies, see Lu (2000) and Lazonick (2004b, 2006b).

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A NEW TAXONOMY OF NATIONAL SYSTEMS OF CORPORATE GOVERNANCE

Andrew Tylecote and Francesca Visintin

INTRODUCTION

This paper is ambitious. Its central purpose is to examine how a number of developed economies, plus the largest developing economy, vary in terms of corporate governance: USA, Japan, Germany, UK, France, Italy, South Korea, Taiwan, Sweden, Switzerland and mainland China. We understand corporate governance in a very broad sense, descriptive not prescriptive: as who controls and influences firms, and how. We are thus dealing very much with varieties of capitalism. In a sense, we shall be seeking to characterise national systems of corporate governance, but we must stress that our concern is always with the situation of the individual firm. We shall find it convenient most of the time to give one label to a country's whole economy, but this will always be an approximation, which conceals variations among that country's firms. At other points, we shall distinguish types of firm and indicate the rough proportions of each type in a particular economy.

Another consequence of our focus on the individual firm is that the nationality of ownership is more interesting to us than the national location of activity. Thus, for example, we would treat the corporate governance of DaimlerChrysler's US operations as essentially German, because it is an

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extension of German structures of power, albeit operating on the US labour and product markets. (This has influenced our choice of countries to examine in detail – Switzerland and Sweden are included largely because although small they have powerful multinationals.)[1] However, this does not mean that we shall ignore national labour markets, employment relationships and their regulation; this provides part of the context of corporate governance. DaimlerChrysler's corporate governance, as a German firm, is clearly affected by German employment relationships.

Such a comparative exercise could take the form of a snapshot at a point in time. We have gone further than this. Capitalist economies are dynamic and where they are is no more important than where they are headed, which in turn can only be understood by examining where they have come from. However, we begin in Section 1 with a snapshot, and the point in time that we have chosen for this – rather, the period of time – is roughly the 1980s and early 1990s. There are two practical reasons for this. First, most of the available literature relates to this period, more or less. Second, there are some clear and striking differences among countries at this time, which are convenient for the taxonomist. The picture can be properly painted in primary colours. Since then there has been a good deal of convergence, and an up-to-date snapshot would have to use a lot of pastel shades. There is, however, one exception, China. Mainland China was in flux in the 1980s and early 1990s, en route to capitalism, and it is much more convenient to take the snapshot roughly as of 2000, when although change was still fast, a recognisable Chinese capitalism had taken shape. Section 1, while focusing on our 11 selected countries, refers in passing to others discussed by the literature we examine, on the grounds that this enriches the discussion in few extra words.

Section 2 is historical, a set of stylised accounts of development sequences, which seeks to explain how the differences described in Section 1 came about. It is also comparative within each of the four broad categories established in Section 1 – comparing routes as well as points of arrival. Section 3 deals with current directions of change. Although it identifies a number of forces making for convergence, it examines the internal contradictions in all the varieties.

SECTION 1. A TAXONOMIC SYNTHESIS

The Shareholder–Manager Relationship

Corporate governance is concerned with the exercise of power over, and in, firms. That makes it a very broad issue, but there are those who prefer to

narrow it. 'Corporate governance … is defined as the organisation of the relationship between the owners and the managers in the control of a corporation' (Lannoo, 1999, p. 272); and the 'owners' are taken to be the stockholders. If this narrowed approach is accepted (we shall do so for the moment), it suggests three questions:

1. Who are the stockholders?
2. What are their broad objectives as corporate owners?
3. What is the nature of their relationship with the managers?

All three of these questions appear to be answered at once by the broad distinction, which has become widely accepted in recent years, between 'outsider-dominated' and insider-dominated financial and corporate governance systems (Franks & Mayer, 1995). (The English-speaking countries are all generally assigned to the 'outsider' category and all the others agreed to have 'insider' systems.) In outsider systems, the predominant shareholders (in weight and influence) are financial institutions that have traditionally sought to manage a diversified portfolio of financial assets with the sole aim of maximising their return on them. (The main categories are investment funds, pension funds and insurance companies.) In order to do so they put liquidity above power, and their relationship with management is 'arms-length'. Accordingly, they do not put their representatives as non-executive directors on company boards. Individuals ('households') may also have a large number of shares (as in the USA), but their holdings in each firm are generally small. The 'insiders', by contrast, have in common that they seek control, more or less *direct* control, over management. They, accordingly, generally do have their 'own' non-executive directors on the board. They may be families, banks, insurance companies, government or other firms. (See Table 1.)

The outsider/insider distinction provides an elegant simplification into two categories when one might have had many more. (Alas, we shall see below that reality is much less simple than it implies.) Where it is least satisfactory is in the answer to the last of our questions, on the nature of the relationship with management. The problem is more obvious in the outsider system. What does the arms–length relationship lead to? Management control, to do more or less what it likes? That was the gist of Berle and Means (1932), relating to large firms in the United States. Manne (1965) argued, to the contrary, that management, whatever their superficial freedom, were in fact constrained to behave as servants of the shareholders because of the pressures of the 'market for corporate control' – if they acted otherwise there would be a hostile takeover and they would be out. On the other hand,

Table 1. Outsider-Dominated and Insider-Dominated Financial and Corporate Governance Systems.

	Type of System	
	Insider-Dominated (Control-Oriented)	Outsider-Dominated (Arm's Length)
Share of control-oriented finance	High	Low
Financial markets	Small, less liquid	Large, highly liquid
Share of all firms listed on exchanges	Small	Large
Ownership of debt and equity	Concentrated	Dispersed
Investor orientation	Control-oriented	Portfolio-oriented
Dominant agency conflict	Controlling vs. minority shareholders	Shareholders vs. management
Role of hostile take-overs	Very limited	Potentially important
Countries in category	All non-English speaking countries, until at least 1990s	USA, UK, other English-speaking

Source: Adapted from Berglöf (1997), Table 1.

if shareholders were satisfied with their service, they would have a high share price, which would allow them to expand cheaply and take over other firms. We should then define this situation as *indirect* control by shareholders. Since Manne's day, the spread of stock options has provided another reason for managers to seek to please shareholders. Nonetheless, there is an abundance of anti-takeover devices that can be deployed, and many US managements are protected by them, particularly those whose firms are incorporated in the relatively permissive state of Delaware. Management control is clearly not dead and buried (Monks & Sykes, 2002).

The insiders' relationships with management are also far from clear. Where the dominant insiders are a family, it is at least clear where their interest lies: in exercising control with a view to long-term profit, so as to protect and increase the family's wealth (and perhaps influence and prestige). (Arrogance or foolishness may of course lead to quite different results, and some families may not take the trouble to exercise their power.) But all the other insiders are institutions – what about *their* corporate governance? Who guards the guardians? With what objectives will the managers of these institutions control the managers of firms? They may act purposefully in the interests of their own ultimate beneficiaries – the banks' own shareholders or depositors; the cross-holding firms' own shareholders; the government's voters and citizens. … But they may not. It is equally likely that they will in

some degree collude with the top management of the firm they appear to control, in a pact of mutual protection: we will not make trouble for you if you do not make trouble for us (or do us personal favours of one sort or another). Management control is thus a possibility also in insider systems.

The Manager–Manager Relationship

We now revert to our broad definition of corporate governance as who controls firms and how. Perhaps part of the who, or at least part of the how, is: other managers. Some at least of the insider systems appear to have a high degree of cohesion among firms. This may arise because of networks of cross-shareholding (as in Japan); because banks or governments control or influence a number of firms which can then be persuaded to cooperate with one another; or simply because in a small country or region everyone who matters knows everyone else. Soskice (1999) defines a category of 'business-co-ordinated market economies' (or CMEs), in which there is 'considerable non-market co-ordination directly and indirectly between companies, with the state playing a framework-setting role'. He excludes from this category a country (like France) in which the co-ordination is largely by the government. His two main measures of business co-ordination are interlocking directorates and employers' wage co-ordination (Table 2, drawing on his Table 4.1).

It is interesting that he describes Italy as 'a complex case, with Northern and Central Italy having many similarities with the CME pattern. … In this

Table 2. Soskice's Measures of Business Co-ordination, 1970–1980s.

	H-Index (Index of Concentration) of Directorates	Employers' Wage Co-ordination
Belgium	0.30	2
Germany	0.21	3
Netherlands	0.21	2
Austria	0.20	3
Finland	0.19	3
Switzerland	0.16	3
Italy	0.11	1
United Kingdom	0.07	1
United States	0.05	1

chapter it will be treated as a northern European type CME'. (Note 7 to p. 103). On his measures of business co-ordination its similarities are much more with UK and US (countries he classifies as Liberal Market Economies, LMEs). We shall see that the same is true in a number of other areas. Likewise Soskice concedes that it is unlike the 'other' CMEs in that the government does not play 'a role in setting a framework for technology transfer, through research institutes and higher education' nor has it made vocational training the object of framework legislation (p. 107).[2] Japan does not appear in the above table on the grounds that Japanese company boards do not have external directors (a mild exaggeration; see Allen and Gale in X.Vives ed.). Clearly, however, there are analogous links within *kigyo shudan* or 'horizontal industrial groups', which also provide a high degree of co-ordination. It is therefore entirely reasonable to classify Japan too as a CME, as he does – one where the co-ordination is largely within cross-sectoral groups rather than industry by industry. Again, however, Soskice seems to go one country too far by letting Korea join Japan in the 'group co-ordinated CME' category. Korea does indeed have the *chaebol*, which being conglomerates with an interest in more than one sector could be described, at a stretch, as providing co-ordination. But this co-ordination excludes small firms (unlike Japan) and overall the main co-ordinator in Korea has been very much the central government, whose interventionist approach is most closely comparable with that of the French government[3] (Kim, 1993). Soskice does not discuss Taiwan or Mainland China. The role of Taiwan's state in its development can be described as 'governing the market', in the phrase of Wade (1990), but certainly in a much less intrusive manner than South Korea's. Taiwan's industrialisation was driven by 'guerrilla capitalism' – by the highly entrepreneurial strategies of small and medium enterprises (SMEs), which during the 1980s produced about two-thirds of its total exports (Clark & Roy, 1997; Hobday, 1995). These SMEs were hard for the government to co-ordinate and disinclined to co-ordinate themselves. It seems likely that on Soskice's criteria Taiwan would resemble Italy in being rather loosely co-ordinated – albeit highly successfully. Mainland China likewise has been far less effectively co-ordinated than its economic successes would suggest. Nolan (2001) shows that its industrial and technology policy largely failed, due to incoherence and bureaucratic rivalries – one might argue that the country is simply too large to be effectively co-ordinated.

We are thus rather further from a neat LME–CME dichotomy than Soskice would concede. We have, among the economies he discusses, not

two categories plus France, but three categories plus Italy, Taiwan and mainland China, thus (adding Japan):

1. LMEs: US, UK, other English-speaking countries.
2. (Government-) Co-ordinated Market Economies: France, Korea.
3. (Business-) Co-ordinated Market Economies: Germanic/Nordic countries, Japan.

In view of its lack of either government or business co-ordination, Italy – and more tentatively Taiwan and mainland China – seems to belong with LMEs. We shall see in the next section, however, that Italy at least does not deserve that term.

The Role of Employees

We have already strayed a long way from owner–manager relationships, the narrow definition of corporate governance, but we have not yet considered one of the strongest candidates for power or at least influence over management: employees. Employee power/influence can be measured in a number of ways. The most popular in the literature is employee or employment protection (OECD, 1999; Bassanini & Ernst, 2002; Pagano & Volpin, 2001). There is a very close match between this measure and the insider/outsider distinction: all the English-speaking countries, which are 'outsider-dominated' by common consent, have very low employee protection and all the other countries have more. However, it is notable that Denmark and Switzerland have not *much* more, and are closer to the English-speaking group than they are to the rest, which are themselves as different one from another as some of them are from the English-speaking group (see our Fig. 1). Three of 'our' economies are not included in Pagano and Volpin's figure: South Korea has strong employment protection (Lee & Lee, 1994), Taiwan has very little (Buchanan & Nicholls, 2003). Mainland China had as

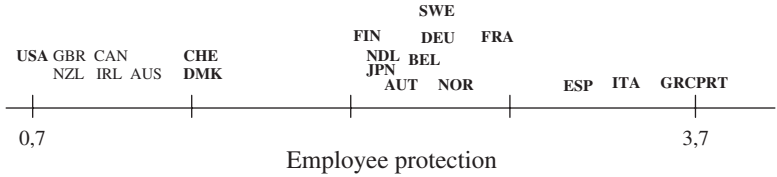

Fig. 1. Employee Protection, after Pagano and Volpin. *Source:* Pagano and Volpin, 2001, Figure 2.

of 1978 (the beginning of the reform programme) a rigid job-for-life system. Since that time employment protection has been steadily eroded, first by the growth of forms of employment ('township and village enterprises', and private firms) in which it never existed – by 2002, state-owned enterprises employed less than a third of the urban labour force, second by the change of regulations, and practice, in the state-owned enterprises, to a position where job protection even there is no more than moderate (Cooke, 2005).

Legal constraints on dismissal are however a rather thin expression of employee power and influence – indeed they are not really an expression of their power at all, merely a constraint on managers'. In some countries employees do clearly have a share of power, as guaranteed to them by various kinds of 'co-determination' laws: best-known in Germany. The German version, unique in its strength and breadth, involves employee representation on the supervisory board, plus strong works councils. In categorising the other countries, works councils are not very helpful, since they are rather widespread and extremely variable both in legal powers and in practical effectiveness (Niedenhoff, 2005). Co-determination at board level, what Niedenhoff calls 'enterprise co-determination' (Unternehmensmitbestimmung), is a better indicator – and in any case tends to be associated with strong works councils. It does not exist among our non-European economies, i.e. the US, Japan[4], Korea (Whitley, 1992; Lee & Miller, 1999), Taiwan (Han & Chiu, 2000) and mainland China.[5] Among pre-2004 European Union members it exists only in Germany, Luxembourg, Austria, Denmark, Finland, Sweden and (in a sense) in the Netherlands (Table 3).

Table 3. Enterprise-Level Co-determination: Employee Representation on Company Boards[a], ca. 2000.

Equal Representation	One-Third Representation	Other Representation
Germany (>2000 employees)	Germany (<2000 employees)	Finland[c]
Denmark[b]	Austria (>300 employees)	Sweden[d]
	Luxembourg	Netherlands[e]

Source: Niedenhoff, 2005.

[a]Either Main board or Supervisory Board, depending on whether the board system is 1-tier or 2.

[b]If employees vote for it; otherwise at least two directors.

[c]1 employee-director (up to a maximum total of 4) for every 4 shareholder-directors.

[d]2 employee-directors for between 25 and 1000 employees; above that, 3; always a minority.

[e]Works councils share in choice of directors. Works councils are (as in Germany) elected by all employees and only employees.

We cannot however exclude Japan from the 'co-determined' category simply for lack of legislation. As Pagano and Volpin show (their Table 2, drawing on Allen & Gale, 2000), when asked 'Whose company is it?', and offered a choice of 'All stakeholders' and 'The shareholders', virtually all Japanese senior managers chose the former – while of course a large majority of US and UK managers chose the latter, as did substantial minorities in France and Germany (more in France). Again, when asked whether job security or the maintenance of dividends should be given priority, the Japanese opted overwhelmingly for job security, while the French and Germans only narrowly preferred it. Clearly, even without co-determination or strong employee protection laws, the Japanese manager is strongly influenced by employee interests – or believes he should be. At least for the core workforce in large corporations, 'joint consultation is linked to collective bargaining, but often covers a very wide range of business decisions and subjects them to information, consultation and sometimes co-determination. … Employee opinion has considerable importance in the internal promotion of management.' (Jackson, 2003, p. 265). As Whitley (1992) and Orru, Biggart, and Hamilton (Eds, 1997) show, all the other East-Asian societies are fundamentally different from Japan, with its decentralised feudal traditions. Thus in Korea, where most firms are family-controlled, decisional processes are centralised at the family level and the attitude of the management towards the employees has been traditional rather than authoritarian (Whitley, 1992; Matsumoto, 1983). Delegation of power towards the lower levels of the organization is limited to technical issues and workers' participation (both informal or through work councils or other mechanisms) is not a constituent of the labour relations systems. While Japanese labour unions are predominantly company unions, Korean labour unions have traditionally been organised on an industry basis; job mobility and firm poaching from others in the same industry are much more common than in Japan (Matsumoto, 1983, Tables 4.2 and 4.3).

If we look at the employment protection and co-determination data together, we can again identify three groups (see Table 4). The first is made up of the English-speaking economies, plus Switzerland, mainland China and Taiwan. Here, there is little employment protection (though mainland China used to have a great deal and Switzerland has a little more than the rest) and no co-determination. The second is made up of the Mediterranean economies (including France) and Korea. Here there is a great deal of employment protection – and no co-determination. The third group has co-determination, and mostly moderate employment protection – though Denmark has scarcely more than Anglo-American levels. So some countries trust everything to the

Table 4. Systems Categorised by Labour Market/Labour Relations Character.

Category of System	Characterisation	Countries in Category
Labour market primacy	Weak employment protection, no co-determination	English-speaking; Switzerland; mainland China & Taiwan
Strong employee protection	Strong employee protection, no co-determination	France, Italy, Spain, Greece, Portugal, Korea
Employee inclusion	Moderate employee protection, and co-determination or influence (by law or custom)	Germany, Austria, Netherlands, Nordic countries, Japan

labour market; the others either rely heavily on legal interference with it, or interfere with it mildly as an adjunct to co-determination. We can sum up our categories:

1. *Labour market primacy*.
2. *Strong employment protection*.
3. *Employee inclusion*.

Belgium, with moderate employment protection and no co-determination, is the only exception – and an unsurprising one, given its Walloon/Flemish division. We shall not discuss it further, since we have not included it in our Eleven.

A Terminal Taxonomic Synthesis

Happily it has turned out that using *role of employees* as criterion leads us in much the same taxonomic direction as using *type of co-ordination*. Four reasonably cohesive groups emerge (economies in our 11 are in **bold**):

1. LMEs, with labour market primacy: **the USA, the UK** and the other English-speaking countries.

   We can name this category *Shareholder Capitalism*, for obvious reasons.
2. Business-co-ordinated Market Economies, with employee inclusion: **Germany**, Austria, **Sweden** and the other Nordic countries, and **Japan**.

   This category can be described as *Stakeholder Capitalism*, since the management literature identifies employees and other (related) businesses as major stakeholders in a firm.
3. Government-co-ordinated Market Economies, with strong employee protection: **France** and **Korea**.

This is *State-led Capitalism*, since while the extent of state ownership varies greatly, the extent of state intervention is distinctive.

4. Loosely-co-ordinated Market Economies with strong employee protection: **Italy**, Spain, Greece and Portugal.

   This category has to be described, rather clumsily, as *Family/State capitalism*. The dominant role of (usually small) family businesses in the economy helps to account for the lack of business co-ordination. The paucity of large privately-owned business largely accounts for the relatively high degree of state ownership.

Three countries of our 11 do not fit neatly into any of these categories. **Switzerland** stands between our first and second categories. It was assigned to the Business-co-ordinated group, but it lacks employee inclusion (and the moderate protection that goes with it). Which is the more important criterion? Business co-ordination is surely rather easy and attractive for a small country with only five or six million people – should that be decisive? On the other hand, it belongs with Germany and the other Business-co-ordinated countries to the 'insider-dominated' category we introduced at the very beginning. We shall argue below, however, that the insider/outsider distinction is not as reliable as it may seem. **Taiwan** and **mainland China** stand between our first and last categories. They both, more or less, respect labour market primacy – mainland China less and only recently. They are no more than loosely co-ordinated – Taiwan because of the dominant role of family businesses, mainland China because of the difficulties of co-ordinating anything tightly in so huge a country. They have relatively few large privately-owned businesses and at least until recently a relatively high degree of state ownership.

Uni-Polar versus Multi-Polar Control

We now have the four main categories with which we shall work, but before looking in more depth at each of them there is a fundamental distinction among them which is worth noting. In the Anglo-American world, ownership is supreme. Of course, ownership rights are limited by various laws, and every firm has voluntary constraints on its actions in the form of contracts it has freely, and normally temporarily, entered into. But the old rule is still deeply respected: A man may do what he will with his own. As we have seen, most large firms are now far from that rule, in the sense that the owners – the shareholders – do not directly control the managers. Nonetheless, the supremacy of ownership endures in the sense that the managers are seen as responsible to the shareholders alone. Outside the Anglo-American world

there is less faith in market forces, but that may not make a fundamental difference. In our fourth category (Italy, etc.) for example, the state has severely restricted firms' rights to dismiss employees, but within the field of action which the law leaves open to management, responsibility is to the shareholders alone; indeed this is usually more clearly apparent than in Britain or the United States, through direct shareholder control.

It is only stakeholder capitalism which really challenges the supremacy of ownership. Beyond a certain size, every firm becomes important to others besides its owners: to its employees; to its bankers, suppliers, customers; to local, regional, central government. All these may regard themselves as stakeholders. Stakeholder capitalism implies that at least some of the stakeholders listed have a share in control, or some established way of influencing management actions and policies. There are three ways in which they may achieve such a position. First, they may gain by accident or design a strong bargaining position vis-à-vis management. This might apply to a strong trade union, or to a bank facing a firm that desperately needed a new loan, or could not make the payments on an old one. Second, and more generally, the law may decree that they should enjoy such a position. Third, the customs and culture of the firm and/or country may demand it.

For all the countries we have selected in the category, we shall examine below how one or other ways to stakeholder capitalism opened. Here, we will venture a preliminary generalisation. When we are looking at the corporate governance system of a country over any substantial period of time, there is some tendency for these three conditions to resolve to the third: a culture which encourages consensus-building among stakeholders. If there is no such culture, the managers and shareholders of a firm will be more inclined to resent and resist union, bank or other 'intrusion on their affairs'. The managers and shareholders of firms in general will be more inclined to unite to fight against laws which mandate this. So where can we find such consensus-seeking cultures?

We find such cultures in the lands of northern and central Continental Europe: the Nordic countries, Germany, the Netherlands, Austria; and in Japan. All these countries have something negative in common: they, or at least their peoples, were never part of either the Roman or the Chinese empires. Those were no ordinary empires: their administrations imprinted themselves upon their territories in such a thorough way that over centuries they crushed all rival structures and foci of loyalty above the minimum building block of the family. In all of these 'barbarian' peoples (as the

imperial Romans and Chinese would have described them), on the other hand, one can trace some thread of organic evolution from tribe or clan. (D'Iribarne, 1989, argues persuasively in this vein for the Netherlands. The comparative works of Whitley, 1992, and Orru, Biggart, & Hamilton, 1997, on the East-Asian countries are at least thoroughly consistent with this line of argument. The argument is given at more length in Tylecote, 1996.) Any argument from history may seem far-fetched, when one considers the very recent origins of the structures of 'stakeholder inclusion' which we see in those countries. German co-determination, for example, and still more so its very different Japanese equivalent, are creations of the late 1940s and early 1950s. There was not a hint of them in the running of German or Japanese firms 50 years earlier: the owner of a business in Germany as in Japan was *Herr im Haus*, master in his own house. And yet what there was, then and earlier, an ingrained preference in both countries for *Gemeinschaft* over *Gesellschaft*, *community* over *association*. When the time came for the old hierarchies to be challenged, the stakeholder firm of one form or another was, not by coincidence, what emerged. In the same way, the various strong links among firms in Germany and Japan (to be explored later) appeared at particular times for particular reasons; but nonetheless the readiness to make and keep them has, we believe, deep roots.

A way of summarising the distinction we are drawing is to say that in stakeholder capitalism there is an acceptance of the principle of *multi-polar* control, while elsewhere control is regarded as naturally *uni-polar*. We have to complicate the distinction a little more when we recognise the special circumstances in Franco-Korean State-led Capitalism: the large private firms there which are privileged by the state do have, in effect, two masters, their owners and the state, and so we may call control there *bi-polar*.

The only change in categorisation, using polarity of control, is thus that Family/state capitalism joins Shareholder Capitalism in the Uni-polar category. (See Table 5).

Table 5. Corporate Governance Types by 'Polarity' of Control.

Number of Poles of Control	Governance Types
Uni-polar	Family/State capitalism shareholder capitalism
Bi-polar	State-led capitalism
Multi-polar	Stakeholder capitalism

Directness of Control and Degree of Managerial Autonomy

We will conclude this taxonomic section by returning to two dimensions of control introduced at the very beginning:

- *Directness of control*. The two uni-polar categories differ sharply in this respect. Family/state capitalism relies mainly on direct control – at least the family part does. Stereotypically, shareholder capitalism relies on indirect control through financial markets, including the market for corporate control, though we shall see below that reality, in the US at least, is more complex. This precise mechanism is not available for stakeholder or state-led capitalism. However, in state-led capitalism a similar distinction can be made between the use of subsidised loans and other favours (indirect control), and state ownership (direct control); on this criterion, Korea has tended more than France towards indirect control. Stakeholder capitalisms vary a great deal in directness of control, with Germany (through the representation of both shareholders and employees on the supervisory board) much more direct than Japan, where as mentioned already, direct control by non-employees is not usually acceptable, while influence is another matter.
- *Degree of managerial autonomy*. If top managers are professional managers (not major shareholders), how far are they under anyone's control at all, direct or indirect? That question, as we have seen, was raised for the shareholder-capitalist United States more than 70 years ago. As we shall see below, it has been raised for some of the stakeholder capitalist countries much more recently.

It is important to recognise – as Soskice and Pagano & Volpin, for example, do – how recent are whatever categories we might assign. Where LaPorta, Lopez-de-Silanes, Shleifer, and Vishny (1997, 1998, 1999, 2000) ascribe insider domination largely to defective investor protection and that in turn to the character of the French and German legal traditions, Pagano and Volpin point out (citing Rajan & Zingales, 2001) that France had more developed capital markets than the United States around 1900, and (citing Lamoreaux & Rosenthal, 2001) that in the 19th century the French Code de Commerce and legal practice had many advantages over the Anglo-American legal regime. Franks, Mayer, and Rossi (2003) likewise show that investor protection was highly deficient in UK until well into the 20th century; nonetheless British manufacturing firms moved during the 20th century steadily out of family control, *before* investor protection

improved. Our categories are creations of the 20th century. In the next section, we examine how it created them.

SECTION 2. A COMPARISON OF DEVELOPMENT SEQUENCES

Family Capitalism and What Became of it During the 20th Century

The default case is entrepreneurial/family capitalism – this is the natural way for capitalism to operate, the way in which almost every capitalist system began, and most capitalist systems round the world continue.[6] Individuals or partners set up firms, mostly with their own money, and those firms that succeed are owned by their founders; when the founder dies, the firm passes to the heirs. One of the heirs runs it, or failing that, a number of them, probably as non-executive directors, keep an eye on the professional managers they have picked. When the family loses interest, or competence, the firm probably fades – or before it does, they sell it to one whose owners are more vigilant.

This simple capitalism is limiting. It limits the longevity of firms, according to the 'staying power' of the family. It limits their growth, because it is unsafe to borrow too much, and they cannot take in much external equity capital: if such capital carries voting rights, that jeopardises family control, and if it does not, the 'outsiders' depend on the efficiency and honesty of the family. It may also, as we shall see, limit their dynamism in other ways. But at all events it provides a simple robust control structure in which the firm's main owners strive to keep the 'principal-agent' problem, of a clash of interests between owners and managers, in check.

There are two quite different reasons why entrepreneurial/family capitalism may remain dominant. One is negative: that more sophisticated control structures work badly. That may be because there is a low level of trust in society generally. (Trust is higher in Northern Europe than Southern, and higher in Japan than in China and South-East Asia – see Table 6.) Or it may be due to legal systems which fail to provide effective protection for minority investors (La Porta et al., 1997, 1998, 2000) – which fail either because the laws are not strict enough or because they are not effectively enforced. We see from La Porta that this is true – *now* – in France, Italy and the rest of Southern Europe, and in almost all less developed countries. (As it happens, these countries generally have a low level of trust.)

The other main reason for family tenacity is positive: that families really wish to maintain control of 'their' businesses. They are more likely to do so

Table 6. Trust by Countries.

Country	Trust	Country	Trust
Norway (96)	65.3	USA (96)	35.6
Sweden (96)	59.7	Italy[a] (90)	35.3
Denmark (90)	57.7	UK (96)	31.0
Netherlands (90)	55.8	Korea (96)	30.3
Canada (90)	52.4	Spain (96)	29.8
Finland (96)	47.6	France (90)	22.8
Japan (96)	46.0	Portugal (90)	21.4
Germany (96)	41.8	Turkey (96)	6.5
Switzerland (96)	41.0		

Source: Knack, S. 'Trust, associational life and economic performance in the OECD', ch.9 in Helliwell (2001). Definition: % giving answer 'Most people can be trusted' to question 'Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?'

[a]The Italian figure depends particularly heavily on the distribution of respondents by region, with the figure for the South much lower than the North (Putnam, 1993). Knack and Keefer (1997) found a lower value, 26.3.

within a social hierarchy in which there is no higher position to aspire to than the ownership and control of a business. In most countries at most periods, that has not been true: the highest position has been membership of the landed aristocracy – who most definitely did not run businesses. (Likewise in pre-20th century China, the highest social position was within the imperial bureaucracy.) Some aristocracies have been more open to *nouveaux riches* than others: the British aristocracy has long been notably open, which increased the incentive to make money but also imposed a quick end to an industrial family's interest in industry (Tylecote, 1982 – who draws the contrast with pre-1945 Germany). There have, on the other hand, always been groups which were excluded from the top of the social pyramid, however rich they were: Jews almost everywhere until the 20th century, Protestants in France and the wrong sort of Protestants in England[7] until the 19th century – and it is these groups which threw up the most successful business families; at least until Society softened and let them in. The least aristocratic country in Europe is probably Switzerland[8], a country that, together with low-trust Italy, shows controlling families at their most tenacious. We shall look at them later.

Tables 7 and 8 below give recent data on family control, which allow comparisons among countries. They have to be treated with great care. Table 8 suffers from the limitation that it shows size of holdings as opposed

Table 7. Ultimate Control of Publicly Traded Firms, 1996–1999.

Country	Number of Firms Examined	Widely Held (%)	Family-Controlled (%)
UK	1953	63.1	23.7
Switzerland	214	27.6	48.1
Japan	1240	79.8	9.7
Sweden	245	39.2	46.9
Germany	704	10.4	64.6
France	607	14.0	64.8
Korea	345	43.2	48.4
Italy	208	13.0	59.6
Taiwan	141	26.2	48.2

Source: Faccio and Lang (2002), except for Japan, Korea and Taiwan, which are from Claessens, Djankov, and Lang (2000).

to effective control. Families may base control over firm X not only on their direct holdings of its shares, but also on control of firm Y which has a large holding of firm X's shares – a hint of this is given by the size of 'non-financial holdings'. Table 7 as far as possible shows effective control. However, both Tables are misleading in making no allowances for the varying numbers of listed firms in proportion to the country's population. Thus Italy and UK have almost exactly the same population, but UK has nearly ten times as many listed firms. The effect this has can be seen by comparing the data in Table 8 for the larger and smaller sets of firms in USA: taking a smaller set (of relatively large firms) sharply decreases family holdings and sharply increases dispersed holdings. If we were to add to the sample for each of these five countries, enough large firms (most or all necessarily unlisted) to even up the proportions, the ones added in each case would be overwhelmingly family-controlled. This might seem to leave Italy still low on family control, to judge from Table 8; but as Berglöf (1997, p. 102) says,

> Investors on the European continent … have made use of a number of mechanisms to separate capital contribution from control. … Closed-end mutual funds and dual class shares have been the prime vehicles of control in Sweden. In Germany and Sweden, and particularly in Italy, pyramiding, whereby chains of firms, sometimes as many as ten or fifteen, own each other, allowing the ultimate controlling owner to minimise its capital stake without affecting the concentration of control, plays an important role. Proxy votes held by banks on behalf of small investors and crossholdings of shares are other ways of concentrating control in Germany. Voting trusts and special golden shares serve the same purpose in Dutch corporate governance. Despite legal restrictions,

Table 8. Ownership Concentration and Identities in Large Listed Firms, 1990s.

Country	No. of Firms	Mean Largest Holder	Median Largest Holder	Family Holdings	Financial Holdings	Non-Financial Holdings	State Holdings	Dispersed Holdings
Shareholder capitalism								
Australia	114	24.8	17.1	30.7	17.5	30.7	0.0	21.1
Canada	280	37.0	29.7	34.6	19.6	40.4	3.3	2.1
G. Britain	**687**	**16.0**	**11.8**	**17.9**	**37.0**	**15.1**	**1.8**	**28.2**
USA	**3070**	**21.9**	**16.8**	**47.3**	**25.9**	**14.6**	**0.9**	**11.3**
US (largest)	500	15.8	11.0	12.4	43.2	18.6	0.2	42.6
Switzerland	**66**	**45.6**	**48.0**	**33.3**	**10.6**	**42.4**	**4.6**	**9.1**
Stakeholder capitalism								
Austria	30	59.4	54.5	6.7	23.3	53.3	16.7	0.0
Denmark	40	23.1	15.0	25.0	12.5	25.0	2.5	35.0
Finland	34	26.9	20.7	5.9	17.6	38.2	23.6	14.7
Norway	42	29.9	26.9	16.7	23.8	47.6	7.1	4.8
Netherlands	66	27.1	16.0	6.1	13.6	43.9	6.1	30.3
Sweden	**54**	**28.3**	**25.0**	**16.7**	**38.9**	**33.3**	**3.7**	**7.4**
Germany	**240**	**54.0**	**51.7**	**26.7**	**15.4**	**48.8**	**7.0**	**2.1**
Japan	**1036**	**15.1**	**8.9**	**5.9**	**6.6**	**58.1**	**0.2**	**29.2**
State-led capitalism								
France	**187**	**48.9**	**50.0**	**25.1**	**17.6**	**51.3**	**2.3**	**3.7**
S.Korea	**16**	**19.1**	**12.8**	**25.0**	**6.3**	**25.0**	**12.4**	**31.3**
State/family capitalism								
Italy	**57**	**45.2**	**47.5**	**3.5**	**40.4**	**47.4**	**3.4**	**5.3**
Taiwan	**11**	**15.8**	**5.4**	**18.2**	**9.1**	**9.1**	**9.1**	**54.5**
Spain	59	37.8	29.1	1.7	23.7	57.6	8.5	8.5

Source: Gugler, Mueller, and Yurtoglu (2004), 'Corporate governance and globalization', Oxford Review of Economic Policy, 20:1, 129–156, Table 2. Most entries refer to 1995/6; Germany: 1985–2000. Our countries are in bold.

corporations in France have complicated crossholding arrangements to ensure concentration of control, and the government has maintained potential influence in large privatized firms through golden shares.

Table 7 largely takes account of these arrangements.

The US, the UK and Switzerland: Different Routes to Different Degrees of Indirect Control

At the beginning of the 20th century both the UK and US economies were dominated by family capitalism. In the large-scale capital-intensive sectors of the day, as Alfred Chandler (1977, 1990) has shown, a few US firms were taking advantage of outside, non-family capital to grow fast to optimum scale – the outside capital being supplied either directly by big banks or through Stock Exchange issues under their sponsorship. (Others, like Ford, managed the trick without any such dependence (Selzer, 1928). This continued into the 1920s. Meanwhile more large firms were being formed by mergers, which diluted the original family capital – as with General Motors (GM). That was not, however, a certain route to indirect or management control. Very early in GM's history, for example, a controlling stake was acquired – and exercised – by the Du Pont family. The key event was the Great Crash after 1929, which showed banks with close links to industry to be vulnerable: thus the Glass-Steagall Act of 1934, which decreed that they stay apart (Roe, 1994). As Roe also shows, the move away from direct control was assisted by anti-trust concerns, in order to break up concentrations of economic power – that was why (in the 1950s) the Du Pont family was obliged to give up its controlling stake in GM, and that is why shareholders are not allowed by law to form coalitions to put pressure on management.

There are still some very important elements of family control in large US firms. Some families have clung to control even of very large companies: if one takes a 10% share of voting rights as giving control, Gadhoum, Lang, and Young (2005) find that 20% of the Fortune 500 are under family control – and they admit that this must be a conservative estimate, since they are ignoring family trusts. The second great automobile manufacturer, Ford, for example, is still controlled by the Ford family, and indeed as we write Ford as CEO. Other very large firms have grown large so quickly that the founders still have managerial as well as shareholder control – as in one of the biggest firms in the world, Microsoft. (Most of those firms, in their rapid rise, depended heavily not only on the capital but also on the guiding hand of venture capital institutions – organisations with a penchant, like families, for direct control – Global Insight, 2004.) Looking more widely, to

all 3607 listed firms, and again taking 10% of voting rights as a threshold, more than half were directly controlled, most of them by families (Gadhoum et al., 2005).

Where then is indirect control in the US economy? The main source of it is the main shareholding financial institutions: mutual funds, insurance companies and (newest and largest) pension funds. Charkham (1994, Table 3.11) shows that the shareholdings of banks are negligible, and those of other financial institutions break down (as of 1989/90) 17: 14: 69 between insurance companies, pension funds and mutual funds. Table 9 shows that taken together they are increasingly important but by no means dominant as of 1992.

These shareholding institutions do not generally take directorships in the firms in which they invest (Warren Buffett's Berkshire Hathaway insurance company is the main exception). Their control, if they exercise any, has to be indirect – essentially through the stock price, as we saw in Section 1. The spread of stock options through US industry – virtually universal, by the 1990s (Lazonick, in Handbook of Innovation, 2004) – showed that top managers wished to present themselves as bound by self-interest to act in shareholder interests and wished in the process to enrich themselves. On the other hand, American managers showed themselves quite well able to fight back against the severest sanction of discontented shareholders – the hostile takeover bid. They could choose where their firm was incorporated, and those who wished to use some form of 'shark repellent', as protections against takeovers are called, could and generally did re-incorporate in the

Table 9. Ownership of Listed Stocks by Sector (as of 31 December).

		Households	Non-Financial Corporations	Government Institutions	Financial Institutions	Foreign Owners
France	1977	41	20	3	24	12
	1992	34	21	2	23	20
Germany	1970	28	41	11	11	8
	1993	17	39	3	29	12
Italy	1993	32	22	28	14	4
United Kingdom	1969	50	5	3	36	7
	1993	19	2	1	62	16
Japan	1970	40	23	0	35	3
	1993	20	28	1	42	8
United States	1981	51	15	0	28	6
	1993	48	9	0	37	6

Source: Berglöf (1997), Table 5 (as of 31 December).

state most tolerant of shark repulsion, Delaware – 'where the courts have traditionally favoured the interests of management over shareholders' (Plender, 2006b, p. 20). By 1982, 37 states had legislation permitting anti-takeover protection: this was then ruled to be pre-empted by the Federal Williams Act of 1968, in the Supreme Court judgment on *Edgar v. MITE*. The open season for sharks which followed was short lived. In 1987, the Supreme Court reversed its ruling, in *Dynamics v. CTS*: since then state anti-takeover laws have been enforceable if they do not prevent compliance with the Williams Act. By 1990, a majority of states had passed such laws, and the rate of successful hostile takeovers rapidly declined (Weston, Fred, Mitchell, & Mulherin, 2004).

It would be unwise to assume that takeover defences serve only to protect management autonomy. They also serve to protect direct control by shareholders whose holdings fall short of a safe 50%. Thus Rupert Murdoch's News Corp in 2004 reincorporated in Delaware, from Australia, with that clear intent (Plender, 2006b). Such shareholders are well-suited by stock options – indeed one of the earliest stock option plans was Pierre Dupont's in GM, begun in 1923 (Sloan, 1964) The protection takeover defences given to direct control is in a sense stronger than that which they give to management autonomy: in each case they entrench the control of those who hold it, but they leave management under pressure (from the stock price) to do what in other circumstances it might not wish to do, viz. maximise shareholder value. It is much more likely that maximising shareholder value is what controlling shareholders in the long run wish to do.

The UK corporate governance situation at the end of the 20th century would have astonished a Rip van Winkle[9] from the beginning of it. Chandler (1990) blames the backwardness of much of British industry in the first half of the century largely on the reluctance of 'industrial capitalists' who had built or inherited a family firm, to share control with 'finance capitalists' in the way that their US and German counterparts often did. (Lloyd-Jones & Lewis, 1998, Ch. 6, concur.) One factor that underlay their reluctance was the geographical and cultural division between the industrial districts of the Midlands and North of the country, and the City of London, which was the main financial hub. The financiers of the City had had very little to do with the development of manufacturing industry during the 18th and 19th century – most of their investments were overseas (Tylecote, 1982). Their ignorance of industry continued, but industry came to them nonetheless in the end. Franks, Mayer, and Rossi (2003) have traced the route: first one family firm merged with another, and another, through an exchange of shares, and each family saw its percentage stake diluted. This would usually happen without a

listing on the London Stock Exchange: there were a number of active provincial stock exchanges. The City of London became attractive when the firms were large and some of the family inheritors wanted to sell out: the London Stock Exchange was the most liquid financial market in the country, if not the world.

But *why* had all those families surrendered first control, then ownership? Franks, Mayer and Rossi do not say. We have already hinted at the reason, in the last section. Wealth in Britain leads quite quickly to absorption into the British upper class, which has never had any interest in manufacturing – but much interest in the City of London (Tylecote, 1982, 1996). If there is an upper class in the United States, it is not so cohesive or so anti-industrial.

By the 1980s the process was complete – without resistance, without legislation: family capitalism was and is exceptionally weak in Britain by comparison with all other major economies. (Gadhoum et al., 2005, Table 5 show how for matched sizes of firms, and again taking 10% as a threshold, the proportion of large firms controlled by families is around one-tenth of that in the USA. Japan is the only major economy, which approaches Britain in the dearth of family control.) An unusually large proportion of British-owned industry was and is in the hands of firms listed on the stock exchange, as is demonstrated by the ratio of stock market capitalisation to Gross National Product (GNP) – decidedly higher than in the United States, far higher than in Germany, France or Italy. Almost all of these firms are owned predominantly by the 'new institutional investors' – pension funds, insurance companies and mutual funds (see Table 10), in the proportion 53:33:13 (Charkham, 1994).

These institutions could easily have seized direct control of all of those firms – and they could do it tomorrow: there was and is no legislation to stop a dozen of them (let us say) banding together and outvoting the incumbent management of any firm, to put in their own boards of directors. They did not do it because they chose not to: it was not the sort of thing they did. They did not own firms, they owned pieces of paper – until they saw an opportunity to make money by exchanging them for other pieces of paper. But while they may not have taken responsibility for firms through representation on their boards, the power they held should not be underestimated. Don Young & Pat Scott (2004) vividly describe its sources and how it is exercised. They could sell at any time to a takeover bidder – Britain being, with Australia, uniquely devoid of legal forms of takeover protection (Plender, 2006a). And if a shark did not happen along when they needed it, they could always look for one – go to a suitable company and solicit a bid. The sheer physical proximity of top managers to institutional shareholders

Table 10. Ownership of Listed Stocks by Sector (as of 31 December).

		Households	Non-Financial Corporations	Government Institutions	Financial Institutions	Foreign Owners
France	1977	41	20	3	24	12
	1992	34	21	2	23	20
Germany	1970	28	41	11	11	8
	1993	17	39	3	29	12
Italy	1993	32	22	28	14	4
United Kingdom	1969	50	5	3	36	7
	1993	19	2	1	62	16
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United States	1981	51	15	0	28	6
	1993	48	9	0	37	6

Source: Berglöf (1997), Table 5 (as of 31 December).

is a factor. The latter are based in the City of London – East-central London. Most headquarters of major British firms are, significantly, also in Central London. The pressure can be personal and frequent. The obvious conduits of pressure are the chairman of the board – normally, quite unlike the United States, a non-executive director – and the finance director. Neither of these individuals need have any background in the firm or even its sector, and so they can the more easily be seen as representing the interests of the 'City' – or as replaceable by someone who will. But even CEOs are eminently replaceable, and replaceable by someone known to be amenable to City pressures:

> "… There is a definite bias towards external appointments … we found a well-developed belief … in the financial markets and the executive search community that top managers should not remain in post for too long … five years in a CEO post is about right. A typical process of recruitment … will start with the selection of an executive search consultant … the shortlist will be compiled. … The absolutely key question 'What will the City think?' has to be answered … if there is more than the slightest hint of hesitation from influential figures in the investment community, the chances of an individual being appointed decrease markedly". (Young and Scott, 2004, pp. 171–172.)

Young and Scott's analysis of FTSE100 firms found that just under two-thirds of CFOs had been appointed from outside their companies, half of chairmen and approximately one-third of CEOs; about half of all CEOs, CFOs and chairmen had been employed by their firms (in some capacity) for 7 years or less; while 'Twenty years ago, the norm was for top managers to

spend the bulk of their careers with one company, and if they moved, to do so in the early part of their careers.' (p. 187)

The City pressures will certainly come. Senior executives described to Young and Scott the influence of senior analysts and fund managers. 'If Y [a senior industry analyst] says we should get rid of a particular business, we will most likely get rid of it' (p. 173). As Ramirez and Tylecote (2004) found, those exerting the pressures generally knew less about both firms and sectors than their counterparts in the United States. What they had in common with their counterparts in the United States was a severe conflict of interest problem, when they are employed by investment banks to manage the banks' mutual funds and/or provide external management for the portfolios of pension funds:

> 'In some years, top bankers, analysts, brokers and fund managers can count their annual bonuses in multiple millions of pounds. When the employing banks are profitable, the bonuses flow. How do banks earn profits? One of the largest sources is the fees earned for corporate finance advice, usually in the form of success fees for supporting transactions…. No wonder these influential individuals prefer 'active' corporate executives!' (Young & Scott, p. 181)

The **Swiss** are famously discreet, and their discretion extends to such sensitive matters as corporate power and control. Vastly less has been written about Swiss corporate governance than about that of US or UK, and so we have to depend to some extent on inference. We shall begin then by reviewing some relevant facts of Swiss history and culture. Like the United States, but much earlier, Switzerland was created through a revolt against the rule of princes and aristocrats, and it thus developed a strongly anti-aristocratic culture. As we suggested above, that is good for business. In such a culture what better way than owning a family business can there be of not only getting and staying rich but enjoying power and respect? (The perfect business to own might be a bank, on which many other businesses depend.) Switzerland thus began industrialisation early, and was never far behind Britain. Like Britain, it was able to develop gradually, and thus few businesses were obliged to depend heavily on external capital. Large Swiss firms emerged slowly, through organic growth, or sometimes through merger. Families tended to hold on to control, though of course not invariably, particularly once their stakes had been diluted by merger. Where they let go, professional managers sometimes filled the gap. It is a high-trust and very cohesive society, where shareholders would not be greatly concerned by the principal-agent problem, rather expecting managers to act naturally as 'stewards', just as Lubatkin, Lane, Collin, and Very (2005) argue that they do in Sweden and France, but not in the US – and Davis,

Schoorman, and Donaldson (1997) argue (much less persuasively) for the United States.

The striking feature of the evidence we have, however, is just how strong family control remained in Switzerland, at least into the 1990s. Table 8, closely scrutinised, shows how. In addition to the 'family holdings' of 33.3%, there are 'non-financial holdings' – shares held by other firms – of 42.4%. And who controls those other firms? Mostly families, presumably, since the other categories of holding are far smaller. It is easy to imagine family-controlled firm X building up its stake in a related family-controlled firm Y, most likely as the Y family reduces its own. One reflection of Swiss firms' shareholdings in other firms is the very high density of interlocking directorships: individuals sitting on the boards of two or more major firms. The three big banks are clearly very powerful: Anderson and Hertig (1994) find that about two-thirds of the 30 largest firms have at least one representative from one of them on their boards. But even the banks are not immune to family power. Schreiner (1984) gives the example of the Sulzer family, of the Sulzer Gebruder machine-making firm:

> …Alfred Sulzer sits on the Nestlé board. Another Alfred Sulzer sits on the board of Sulzer Gebruder, and the la Suisse insurance company, and chairs the *Zurich Handelsbank*. Georg Sulzer sits on the boards of *UBS*, of Swissair, of Winterthur Insurance (among other firms) and chairs Sulzer Gebruder. Hans Sulzer is on the *UBS* board; Henry Sulzer is a director of Sulzer Gebruder; Henry G.Sulzer is on the board of Adolph Saurer and Peter Sulzer is a director of Sulzer Gebruder (p. 91; our translation. Italics added).

Schreiner, in conclusion, refers to the 'structuration of Swiss financial capital in an oligarchic form due to the influence of family property in the majority of large firms.' (p. 93). Swiss company law and practice made it easy for families to keep control without maintaining a majority of equity. As Anderson and Hertig explain, there are '… two types of voting shares (bearer and registered) and two types of non-voting certificates …' (p. 524):

> This structure originates from the desire of shareholders who floated their companies on the market to collect funds from the public without losing the control over them nor the right to determine their strategy independently. This phenomenon was particularly prevalent in the case of family-owned corporations. … [it] made it possible … to resolve succession problems by giving non-voting participation certificates to family members who wanted to sell their stake in the company. (p. 524)

Why did the Swiss system not evolve into stakeholder capitalism – and how far from it is Switzerland? In an informal sense, particularly in the German-speaking cantons, not far. The networks among firms are quite strong, as Soskice's data shows, and industrial relations are traditionally cooperative.

History and tradition places at least the German-speaking Swiss on the northern side of the cultural line that we drew between 'barbarian tribes' and 'empire'. What makes the difference (as will be clearer when we discuss the stakeholder systems) is the absence of serious shocks. There was never any reason seriously to question the principle that 'a man may do as he will with his own': no threat of revolution, no dangerously powerful union movement, no devastation from which firms could not recover without much outside help.

Shareholding Capitalisms Compared

We can see from the argument above that Switzerland sits fairly comfortably at one end of a 'uni-polar' continuum, which has the United States in the middle and Britain at the other end. Britain has a high degree and wide extent of indirect control. The United States has a much wider extent of direct control – by founders, families and private equity – and in the indirectly controlled majority of large firms, there is more managerial autonomy. Family control seems to extend further still in Switzerland and where there is not direct control there is even more managerial autonomy – only recently challenged, in the last decade, by shareholder activists like Martin Ebner (Economist, 2000, 2001a, 2001b). Both direct control and management autonomy make for closer relationships with other stakeholders than does indirect control: as Carlin and Mayer (2000) have pointed out, family shareholders and other controlling insiders can commit to long-term high-trust relationships because they will be there in the long term. Under indirect control, a takeover is possible at any time; and even the fear of one will shorten management's time horizons (Demirag and Tylecote, 1992; Tylecote and Ramirez, 2006). Fewer American and scarcely any British managers in large firms can count on their successors to hold to any deal that is not contractually watertight. There is now a quite extensive literature on how UK corporate governance in listed firms blights buyer–supplier relationships: see for example Cooke and Morgan (1998) and Tylecote (1996) (see Table 11).

Germany and Japan: Paths to Stakeholder Capitalism

Much as in the United States, **German** family capitalism at the beginning of the 20th century was, so to speak, supplemented by a small number of large firms which had expanded with the help of bank loans and/or bank-sponsored share issues. As Jeidels (1905) showed, Germany's dual board system of corporate control, unique at that point, had been developed largely to give the big banks good arrangements for oversight. It was not until the 1970s that bank influence in German industry began to wane.

Table 11. Characteristics of Shareholder Capitalisms, early 1990s.

	United States	United Kingdom	Switzerland
Extent of family control	Moderate	Very low	Probably high
Extent of private equity and/or employee control	Moderate	Low	Probably very low
Extent of managerial autonomy	Moderate	Low	Moderate
Extent of indirect control	Moderate	High	Low
Cohesion of inter-firm networks	Low	Very low	High

The banks survived the Crash in good shape: indeed this and other recessions rather tightened their grip, as insolvent firms conceded share stakes to them in return for loan forgiveness. But the balance between bank and family power was not a zero-sum game: a family which wanted to maintain control of a fast-expanding firm might well prefer bank loans and even a bank share stake to exposure to the dangers of external equity capital via the stock exchange. What Germany lacked, until the 1940s, was a tier of banks below the Big Three (Deutsche, Dresdner, Commerz) which could nurture smaller family firms. In the late 1940s, the Federal Republic equipped itself with two such tiers, both publicly owned, at the provincial (Land) and municipal levels. Just as recession had increased banks' share stakes, so the post-war boom increased existing firms' dependence on them for loans – and produced a new crop of entrepreneurs who needed their loans most of all.

Just as banks and families could coexist as sources of power, so (it turned out) could employees with both of them. In the acute social tensions following both world wars, with widespread industrial strife and the threat of worse, democratic governments saw the best hope for harmony in co-determination (seats for employee representatives on supervisory boards) plus strong works councils. Managers and owners accepted them as a lesser evil. They found that family firms could accommodate themselves to employee influence. It turns out indeed that the two stakeholders have strong interests in common: they both tend to have a long-term attachment to the firm, and so family owners (or managers with their support) can make long-term commitments to the workforce that they can be trusted to keep.

The harmony of interest *among* family firms in Germany was even more easily perceived and realised. The guild tradition of organisation by sector was never broken, and was built on both by government initiatives and by those of the firms themselves. Employers' associations, for example, remained dominant in German wage bargaining long after they had

withered in Britain and the United States. Among listed firms, there has been a high degree of crossholding, and (as shown above) of interlocking directorates.

Family capitalism in **Japan** shows continuity only interrupted in the 1940s. During the early 20th century Japan developed a dual economy in which large-scale activities were almost all undertaken by the great *zaibatsu* conglomerates, each under the control of one or two families. Some non-zaibatsu family firms – like Matsushita and Toyota – grew from small beginnings early in the century to substantial size by the end of the 1930s. By that point the initial emphasis which Japanese capitalism, and the government, had placed on liberal market rules had been modified. Some large firms had found it convenient to build long-term relationships with their more important suppliers and their more important employees, and to draw on Japanese tradition to some extent in doing so. The 1940s and early 1950s, however, brought a transformation. The American occupation authorities broke up the zaibatsu into their component parts and did their best to confiscate family shareholdings and eliminate family control. Later, the component firms came back together, but as *kigyo shudan*, industrial groups bound together by reciprocal shareholdings: the family control was gone (Morikawa, 1992; Dore, Lazonick, & O'Sullivan, 1999).

The history of family control in other large firms has been varied. Japanese tradition insists that a firm is a community, and as such can only (in normal times) be controlled from within. There is therefore no legitimacy for control by a family, which leaves management to others. Some large firms have, therefore, passed abruptly out of family control after the death of the founder – Honda and Matushita, for example – and in general there is little family ownership or control among large firms (Matsumoto, 1983; Gadhoum et al., 2005). On the other hand, a family which is willing to manage – like the Toyodas in Toyota – is able to do so with a small shareholding (Nakamoto & Pilling, 2005). The other 'stable shareholders' – financial institutions and other firms – give support, only by protecting the firm from takeover. As in Germany, a myriad of small and medium enterprises grew up during the post-war recovery in which the controlling family is still in its second or third generation, and still mostly very much engaged. (As of the early 1990s, companies with fewer than 500 employees account for 65% and 70% of manufacturing employment in Germany and Japan respectively, as opposed to approximately one-third in US and UK (Vitols, 2003).)

As in Germany, the recovery depended heavily on bank lending both by the ex-zaibatsu banks, mostly within their groups, and by the 'city banks',

which lent mostly to small and medium enterprises in their areas. (And also by public sector financial institutions, though their funds went mostly in and through the commercial banks.) What was different was that there was no corporate governance structure through which banks could – or at any rate, did – exercise influence (Hanazaki & Horiuchi, 2000). In the 1950s and 1960s, the period of very fast growth, high rates of investment depended on high bank debt, mostly borrowed from a 'main bank'. This bank had every incentive to keep good oversight of the borrower's affairs, and even if it did not, any serious error of strategy or mismanagement would put the firm at the bank's mercy. For the duration of the emergency, the bank would then put in one of its employees as a (full-time) top manager of the firm – if it was big enough to justify the trouble. No emergency: no bank involvement; and as Japanese growth slowed from a gallop to a canter to a trot, more and more firms took the opportunity of reducing, even eliminating their debts (Vitols, 2003).

The legal structures of corporate governance made even less provision for employee representation – no co-determination or works councils. The *modus vivendi* between the core employees and management was worked out within each firm, yet the forces driving it were much the same as in Germany – the reality of industrial strife, and the fear of worse. What was conceded to the core employees was commitment and representation: commitment to treat them as permanent members of a community, which would rather accept a cut in profits than fire them; and representation by a company union whose views would be taken very seriously by top management. The firm gained because the commitment was mutual, and because management infinitely preferred the company union to the left-wing ones which had terrified them in the late 1940s (Dore et al., 1999).

The lifetime employment/company union system covers only a small minority – some 10% – of the Japanese labour force. Equally important are less formal understandings and commitments in medium-sized, non-unionised enterprises. As in Germany, family ownership and control means that such commitments can be meant and met. As in Germany, such logic applies even more obviously to relationships among firms: informal, highly personalised among smaller firms, cemented by cross-holdings among larger ones. The main difference from Germany is that inter-firm co-operation is less at sectoral level – no common arrangements for training or wage bargaining, for example – and more between suppliers and customers even in different industries, brought together either by local links or by those of the kigyo shudan groups (Waldenberger, 2000).

Sweden: Stakeholder Capitalism Gained and Thrown Away

The early years of **Swedish** capitalism – until the 1920s – show close resemblances to Germany; and not by coincidence, since German influence was strong. Family firms blossomed, and the largest and fastest growing of them depended heavily on close relationships with banks. They cooperated closely with others in their sector, and their employers' associations clashed sharply with the strong and growing union movement. There were crucial developments in the 1930s: the Slump and the Krueger scandal convinced government that the bank–industry relationship must be controlled, and not be allowed to be too close – bank shareholdings in industry were forbidden, for example; though it turned out later that these restrictions could be largely evaded. More important was the arrival in power of the Social Democrats in 1932. They were (in effect though not formally) the party of the unions, and from then on for 60 years, capitalism in general and family capitalism in particular existed on sufferance (Henreksson & Jakobsson, 2005).

On the face of it capitalism was not under threat. State ownership of industry (or banks) was not part of the Social Democratic plan, and was only resorted to in the crisis years of the 1970s. It was capitalists, and their capital, that were threatened. Personal income and personal wealth were subject to steeply progressive taxation. The *very* rich were able to put their shareholdings into foundations that were partly protected from taxation, and to protect themselves from it if they were prepared to live abroad. Profit recycled into investment was much less heavily taxed. The effect was to favour large firms over small, and reinvestment within large firms against investment into fast-growing small firms. If wealth was to be taxed away, who was to own industry's capital? The answer from the 1970s onwards, was the 'wage-earners' funds': the pension funds of the population at large – with the threat that if, as the Social Democrats proposed, they were state-controlled, this would be a sort of back-door nationalisation.

For a time – let us say very roughly for 30 years from 1940 – it was possible to contain these pressures within a stakeholding compromise. The powerful unions had their say within industry through various mechanisms including board membership. Firms with any reason to do so, did what Swedes do best: talked to each other, reached high-trust understandings with each other.[10] Among larger firms these relationships were often assisted by crossholdings and by membership of industrial groups. Miraculously (given the tax position) industrial capital remained generally under the control of capitalists. The miracle largely depended on the dual class share system, in which B shares accounted for most of the capital and A shares for most of the votes. A modest majority of the A shares gave control.

But which capitalists? There was a gradual process of concentration of control into the hands of just two groups: first and foremost the Wallenberg family group, who controlled the Skandinaviska Enskilda Bank and the Investor holding company, and second the Handelsbank group with its holding company Industrivaerden. More and more A shares passed into their hands, and more and more firms were bought by the giants of Swedish industry – like Ericsson and ASEA – which they already controlled (Berglöf, 1994).

Stakeholding capitalism requires intimacy, real engagement on all sides. The controlling capitalists were becoming too distant for that, their interests too diverse. The problem of distance rapidly worsened during the 1980s, as the giants went on a domestic and international acquisition spree (Isaksson & Skog, 1994) – able to pay with B shares without Investor or Industrivaerden losing control. 'Spree' is perhaps unfair, since the acquisitions were not generally badly chosen or subsequently mismanaged.[11] As Lubatkin et al. (2005) argue, Swedish culture gives good reason to believe that managers will act honestly as 'stewards' of owners' and other stakeholders' interests; and 'unlike the stuation in countries such as Britain, Swedish investors show no reluctance to buy low-vote shares' (Isaksson & Skog, p. 293). It was the effect on Swedish capitalism, which was definitely negative. The relationships and understandings among stakeholders which develop over time within a particular national culture and within a restricted geographical space, cannot be replicated globally: a difficulty which (as we see below) now besets all those stakeholding capitalisms coming to be dominated by globalised firms.

Stakeholding Capitalisms Compared

It is an irony that of the three stakeholding capitalisms we compared above, it is in the one where the employees have been most strongly organised that stakeholder power, and with it their own inclusion, was most early and most thoroughly undermined. The Swedish unions used their political power to destroy – or drive offshore – the family ownership that was employees' natural stakeholding partner. The dual class share system, which allowed two groups to maintain an increasingly precarious and disengaged version of family control, served as the basis for early globalisation – fatal for employee inclusion, and tending to exclude other stakeholders too. So while Swedish unions, on the face of it, maintained their power – co-determination rights etc. – they were increasingly talking to managers neither willing nor able to do the old sort of deal with them. Nothing so dramatic had happened to German or Japanese capitalism by (say) the early 1990s. Germany and Japan, much larger countries, could and did develop major exporting and even multinational firms without (at first) undermining the dense

Table 12. Characteristics of Stakeholding Capitalisms, early 1990s.

	Japan	Germany	Sweden
Main levels of inclusion (employee and other)	Firm	Firm and sector	Firm and sector
Basis of employee inclusion	Formal (10%); informal	Legal	Legal
Internationalisation of industry	Moderate	Moderate	High
Extent of family ownership	High	High	Low
Crossholding	High	Moderate	Low
Bank shareholding in industry	Substantial	Substantial	Illegal; but via investment companies substantial, given A-share boosting
Bank lending to large firms	Low	Low	Low
Bank directorships in large firms	Only in crisis	Normal	In effect normal, via investment companies

networks of related firms at the core of their economy. Nor did their tax systems discriminate so harshly against entrepreneurs, let alone attack private wealth in general (see Table 12).

Other Nordic Stakeholding Capitalisms

It is extremely dangerous to talk of Nordic capitalism. The Nordic countries are all small, egalitarian, with strong unions. Beyond that, the differences are striking, and they are rooted in history. Outside Skane, Sweden (and Norway) never knew serfdom. Denmark did, and there were many relics of feudalism in the countryside until the Reventlow land reforms of the early 19th century. Deep down, Danes are still resentful villagers, far less willing than Swedes to trust central government or to up-scale. The tax burden on their entrepreneurs was never crushing. Their firms are much smaller and less globalised than Swedish – or indeed than German or Japanese. As such their stakeholding relationships are very much at sectoral level, and very stable (Lundvall, 2004); the structural resemblances are then more with the dynamic Mittelstand-dominated parts of Germany (e.g. Baden-Wurttemberg and Bavaria) than with Sweden. Finland is different again, with striking resemblances to Japan: a 20th century anti-Communist land reform; late and accelerated industrialisation led by cross-sectoral industrial groups each associated with a bank (Halla, 1999). But we have no space to develop these arguments, or even to discuss Norway or Iceland.

France and South Korea: Government and Family Capitalists Working Together

Imagine a country whose history and culture show no stakeholding traditions or inclinations: a rather low-trust, decidedly authoritarian society in which family firms will be managed to maintain the owners' authority at all costs. Let it, with that, have a tradition of a strong central state. Let that state be confronted at some point in the 20th century with a shattered economy, which those in power, with their countrymen's full support, are determined to bring with the utmost speed to a position of respectable development. What are they to do? They are not foolish enough to nationalise the whole or even the bulk of the economy: they will therefore choose to work *with* family capital rather than against it.

This most clearly applies in two countries, one Western, one Eastern: France and South Korea. (In both countries the government took this role in the 1940s or 1950s after the country had emerged from foreign occupation in a very difficult economic situation; but the tradition of government intervention goes back much further, as Whitley (1992) shows for Korea.) In **France**, a more-or-less right wing government took power at Liberation in 1944, and proceeded to nationalise a small part of industry and a large part of the banking system. More significantly it set up a Planning Commission (Commissariat au Plan) with which at least to orchestrate the actions of major firms whether public or private.

This orchestration required a cohesive network of senior managers, bureaucrats and politicians. There was already an educational élite which received its undergraduate education at a few Grandes Écoles, headed by the École Polytechnique; it was in future to follow that with a postgraduate education at just one institution, the newly created École Nationale d' Administration. After that one might work in the private or the public sector, in industry or government or banking; but one would almost certainly have a high position in a large organisation, and one would find it easy to work with others of one's kind (O'Sullivan, 2001). One was expected to do so: private sector firms which expanded at the speed and roughly in the way the government wanted, would benefit from cheap long-term loans from state-owned banks, from subsidies of various kinds, and where appropriate from public sector contracts. The private tax affairs of their managers, moreover, would not be closely or unsympathetically scrutinised. As Soskice puts it (1999, p. 104), 'much of business co-ordination takes place through the networks of the elite of business leaders whose careers have interpenetrated public and private sectors and which include senior civil servants'.

By the 1970s the French economy was too open for the national planning system to be of much relevance, and state intervention, or orchestration, became increasingly focused on a number of relatively high-technology sectors in which its main weapon was massive subsidy to R&D in centrally directed sector-wide programmes – combined, as before, with public sector purchasing (Munstar & Laredo, 2002). After the Socialist government came to power in 1981, most of the remaining privately owned large firms in those sectors, and some others, were nationalised. That left a considerable number of large family-controlled firms (a large proportion of them, old ones in consumer sectors, where state leadership and subsidy were neither offered nor wanted). What France lacked were firms controlled either in the Anglo-American style by outside shareholders, or in the German style by commercial banks. Banks were not stakeholders, and nor were employees, outside top management. Other firms might be: there was considerable crossholding among large firms, and in some areas (like Lyon – Lorenz, 1989) close relationships among smaller ones. But there was nothing to compare with the sectoral cohesion of German firms or the dense networks of Japanese industry (Hancké, 1998).

The state orchestration of **Korean** economic growth started later and lower, in the 1950s, amid the devastation after the Korean War. The structures through which the state worked took longer to develop than in France. We now recognise them as powerful ministries, obedient state-owned banks, and a small number of family controlled conglomerates, the chaebol, headed by Hyundai, Samsung and Lucky Goldstar. The ministries, to put it baldly, told the banks to lend long-term and cheaply to the chaebol so long as the chaebol broadly co-operated with government strategy (Yoo & Lee, 1987). But those chaebol we know are the survivors of a considerably larger group in which the mortality was high, particularly in the early years. The government did not guarantee success. What it did was target industries for a period of protection (where the domestic market could be substantial, as with motor vehicles) and/or of large cheap loans. A chaebol which chose to take a seat at the table, might lose its stake, perhaps disastrously, but at all events it could bet heavily, and play a long game. As in France, the public sector set out to invest in synch with the private. There was only one major state-owned manufacturer, the steel firm POSCO, but there were state-owned utilities, and the education system also received massive and largely targeted investment. As in France, a network of senior people was needed who spoke the same language; and that was to hand, in the corps of army engineers, toughened and no doubt bonded in the War. One of their number, General Park Chung-Hee, took power in a coup in 1961 at the

Table 13. Characteristics of State-Led Capitalisms, late 1980s.

	France	Korea
Extent of state ownership of industry	High	Low
State ownership/control of banking system	High	High
Extent of old family capitalism, including large firms, outside state-led networks	High	Low

beginning of the economic take-off (Amsden, 1989).[12] Like France, again, and unlike Germany and Japan, employees were not stakeholders – industrial relations were generally confrontational and job security was given by law not by any sort of employee inclusion (Alston, 1989). Nor were there any networks of strong inter-firm relationships outside the chaebol – they conspicuously did not treat their smaller suppliers in the Japanese way (Orrù, Biggart, & Hamilton, 1997) (see Table 13).

Italy and Taiwan: Family Tenacity Alongside the State

In **Italy**, family capitalists share control of the economy with a large State sector. It seems a natural combination: the State can do what they cannot – it can make large investments with patient capital, and in parts of the country where family capitalism is for some reason weak (the South, for example) it can step in and fill the gap. But this balance is no more than 70 years old. Until the Slump of the early 1930s the large investments were provided mainly by bank (and some stock market) capital, with a system not unlike Germany's. It was only then, when the financial system collapsed, that the Italian state, with great reluctance, stepped in – both to own and control industry directly, and to provide risk capital to private businesses. After the overthrow of the Fascist government there were 40 years of governments dominated by the Christian Democrats, who were strongly influenced by Southern demands for state investment. Northern Italy did not want state-owned industry: it wanted state funding for its own entrepreneurs, and with the establishment of regional governments in the 1960s it completed the institutional basis for it. (At the same time it got restrictions on management freedom – to lay off employees, for example – which no entrepreneur would have chosen but which appealed particularly to Southern voters (Barca, 1997).)

We saw above how difficult Italy was to classify in the conventional categories, and one reason is its diversity. There are at least three Italies: the First Italy of the old industrial regions of the North West (Lombardy,

Piedmont and Liguria), the Second Italy of the South (arguably plus Rome and its region), and the famous Terza Italia of the North East (plus Tuscany). The First Italy's economy, outside the metropolis of Milan, has long been dominated by old family-controlled firms, some of them very large, like the Agnellis' FIAT – in which the family rules alone, and employees are very much not stakeholders. The Second Italy's economy has long been stagnant, dependent on Northern subsidy and state employment. It is in the Third Italy that the fastest growth has taken place, particularly since 1970, in a multitude of industrial districts specialised by sector, with dense networks of family-owned small and medium enterprises served by regional and municipal public sector banks and other well-run local agencies (Evangelista, Iammarino, Mastrostefano, & Silvani, 2002). It is in the Third Italy that one comes closest to stakeholding capitalism, in the sense of strong – but informal – relationships, among entrepreneurs and between them and key employees.

A neat description of **Taiwan**, in this context, could be as the Third China (the first two being the People's Republic or Mainland, and Hong Kong). Like the Third Italy, its economy and society was largely composed of smallholding peasants, as of the early 1950s (after the land reform). Third Chinese like Third Italians took to entrepreneurship like ducks to water once there was peace, economic stability, free trade and a competently run public sector. They did so, like the Third Italians, for and with their families, and in industrial districts densely networked with their friends, relations and neighbours (Jou & Chen, 2001). There was, however, one vital difference: the Third China was independent. True, it was ruled by refugees from the mainland, but they knew very well that their prosperity depended on that of the Third China. The rules, structures and public sector firms they set up responded, however imperfectly, to the circumstances and needs of that China, not the others (see Table 14). Thus labour market regulation was minimal (Buchanan & Nicholls, 2003), and the state invested in large-scale industries which might at least arguably complement the rest of the Taiwanese economy (McBeath, 1997).

The First China: State and Family Capitalism, Separate and Together

The People's Republic of China is a special case in this taxonomy for at least three reasons. First, it is a developing country, still much poorer than any of our others. Second, from 1949 to 1978 it was not a capitalist country of any kind at all. Third, it is much larger in population than all the others we have discussed, put together.

China's size has a number of important implications, not all of them obvious. One is that the Chinese state has multiple levels, and the lower levels necessarily enjoy considerable freedom of action, because the country cannot be run any other way. This helps to accentuate regional differences, and it means also that when we talk about state ownership and state control, this may mean that management is responsible – directly or ultimately – to senior officials in Beijing, or to the council or party secretary of a small village; or any of the half-dozen rungs of the administrative ladder between. Naturally, the level on the ladder makes a difference. In the early period of reform after 1979, it was a convenient first step to allow the lowest two levels, which are translated as *townships* and *villages*, to set up and run firms which operated freely, outside the state planning system.[13] Since then, 'state-owned enterprises' (SOEs) in the conventional definition, have been those reporting to and owned by the upper three or four rungs, the rest being included in the term 'township and village enterprises' (Cai & Tylecote, 2005). In fact each level behaves differently from the next, and so we prefer to refer to state ownership in all cases.

After the 'township and village enterprises' had led the way back towards the free market, reform proceeded in a number of steps. The restrictions on the formation and operation of ordinary private firms were progressively loosened, and in parallel to that, state-owned enterprises were exposed more and more to market forces, and given more and more freedom to respond to them. For at least a decade it has been possible to differentiate 'state ownership' on two dimensions: the level of the state, as explained above, and the proportion of state ownership, from 100% to a minority – to zero. The state became more and more willing to sell, and the smaller the firm the larger the stake it would sell – with many of the smallest firms going entirely private. By 2004, a plurality of non-farm employment was in pure private firms and the rest well spread among the other categories (Tylecote & Cai, 2004).

As we write, the Chinese Communist Party (CCP) is in the process of making peace with the entrepreneurs, with them now being admissible into Party membership. Such a reconciliation would be historic, and not only from the CCP's point of view. For many centuries the Chinese merchant, or entrepreneur, class suffered from its low status and insecurity vis-à-vis imperial officials. In that context, the third quarter of the 20th century was just a particularly difficult chapter in an always-difficult relationship. More normal service was resumed in the fourth. The response to 'normality' was similar to that in Taiwan and in the Chinese diaspora: do not expect help from above, do not expect loans from banks, depend

on your own energy and resources and cooperate with others like you, particularly if they are family, friends or neighbours. Industrial districts thus emerged, though more slowly than in the Third Italy and much more slowly than in Taiwan, because they did not have even regional or local government help, let alone national. They now pose a competitive danger to their Italian counterparts. What the private sector could not enter were industries, which were in any way capital-intensive – 'capital' referring to any investment including R&D.

For the entrepreneur, relations with officials must always present much more threat than opportunity. The threat could with luck be neutralised by the careful cultivation of *guanxi* – contacts – among them. For the manager of the state-owned firm, the situation was quite different (and the larger and higher the state stake, the more different it was). He *was* an official, but a junior one. If he did well – in the eyes of his superiors – he would be promoted out of industrial management into a more senior official job. Doing well, particularly in the early days of the reforms, might not necessarily involve making profit – it might for example mean maintaining employment – but as the reforms progressed, profits mattered more and more. But the financial performance was being observed, so to say, from a long way up. The SOE manager's situation became more and more similar to that of a British manager subject to the remotest form of indirect control: the relevant officials looked at the figures for profit, investment, etc. without any real understanding of what lay behind them. They were highly *disengaged*, and accordingly they could only appreciate what was highly visible.

Fortunately for China, there was a middle ground between the entrepreneur and the SOE manager as we have described them. That was at first occupied mostly by township and village enterprises – though most of them had little better access to capital or contacts than private entrepreneurs. More recently the growing group of minority-state-owned enterprises have moved onto it. Their top managers are not officials, and they may well have substantial personal shareholdings in the firm. The state has an interest in the firm, in both senses, and the relevant officials will have influence – they may be on the board of directors – but they cannot give the top management instructions. In return for that influence, the firm has abundant access to capital and official cooperation of all kinds. It is a good bargain, and such firms have been identified (Cai & Tylecote, 2005) as the most dynamic in the Chinese financial and corporate governance system.

SECTION 3. DIRECTIONS OF CHANGE AND INTERNAL CONTRADICTIONS

Natural Decay and Mechanisms of Reinvigoration

The classic natural decay of **entrepreneur/family capitalism** is expressed, with some overstatement, in the Lancashire saying, 'clogs to clogs in three generations'[14]: the first generation builds up the firm and makes the money, the second generation mismanages the firm and spends the money, and the third is poor again. With small firms this is part of an ecology which usually includes the birth of many new firms to replace the failing old ones. (Some of course survive for centuries.) A firm that grows large enough to employ competent professional management before the family becomes incompetent or uninterested, goes to managerial autonomy instead of (or on the way to) mismanagement and failure. This may then be followed by a movement to indirect control of the classic Anglo-American type; or there may be a return to direct control, for example through a management buy-out (Fig. 2).

Even among the population of large firms it is perfectly possible for a large element of entrepreneur/family control to be maintained indefinitely, with new entrepreneur- or family-controlled firms rising up as fast as others decline or move out of that category. This appears to be the case in the United States, with rapid growth of firms in dynamic areas assisted by venture capital. The Pixar-Disney merger in early 2006 makes a nice example: the great Disney firm founded by Walt Disney during the 1920s to make animated (cartoon) films became management-controlled after Walt's death. By the 1990s, it was sufficiently sclerotic to miss the opportunities offered by computer animation. Pixar, founded during the 1980s by Steve Jobs (one of the founders of Apple Computer during the previous decade) exploited those opportunities brilliantly. Jobs, majority shareholder of Pixar, valued at $7.4bn in the merger, became through it the dominant shareholder in Disney (Economist, 2006a). Switzerland offers another, less dynamic, example of enduring family control, partly through arrangements which allow it to be maintained with a modest fraction of the equity (which exist to a lesser extent in the United States). So, with less economic success, does Italy.

Entrepreneur/family capitalism is however an element within a corporate governance system, not a category of corporate governance system. We shall examine our categories one by one for natural tendencies of change and decay.

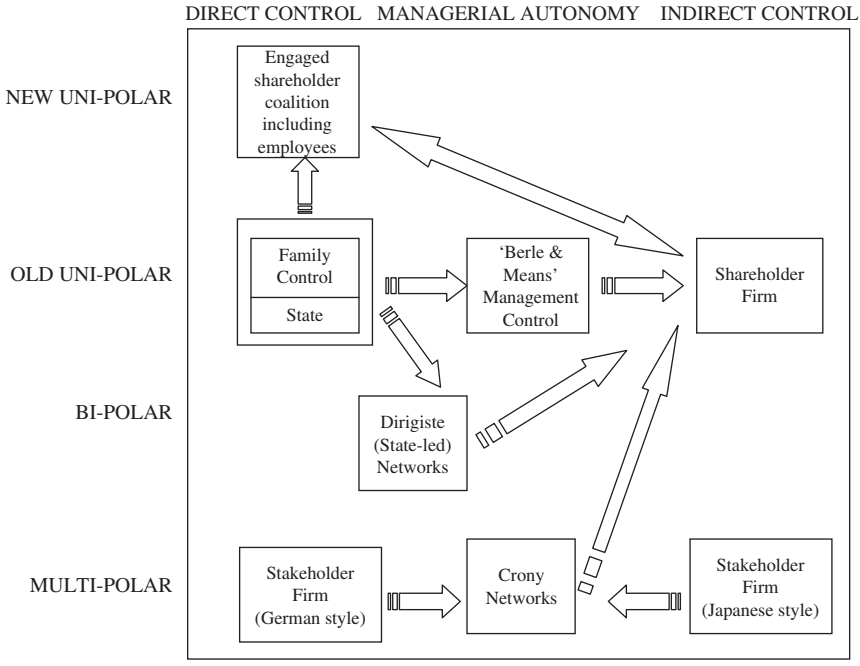

Fig. 2. Types of Control and Current Directions of Change at the Firm Level.

Stakeholder capitalism has what appear inexorable pathways of decay, at various levels. The German and Japanese banks which in the aftermath of the last war made massive loans to new firms (or to old ones rebuilding themselves) needed to familiarise themselves with the firms' business and technology in order to keep their risk down to reasonable levels. Ten or twenty years later, it was enough to know the firm. By the 1970s, with the years of fast growth over, successful firms were in a position to reduce their debts: which meant that there was less occasion for banks to hone their interventionist skills on insolvent customers or to watch anxiously over the others. (Corbett & Jenkinson, 1996, show how the volume of bank lending to industry dropped in Germany and Japan.) While they generally maintained or increased their equity stakes and thus their power, they had less and less incentive to use it actively.

A similar change took place in the relationships among firms with reciprocal shareholdings (this is most relevant in the Japanese *kigyo shudan*). During the years of fast growth, while the Japanese economy was relatively

self-sufficient, they were largely buying from and selling to each other, which meant that they had to co-ordinate investment and generally take a strong interest in each other's affairs. Entry into a new product area might well be by the grace of a fellow group member which had previously bought from abroad and now acted as concessional customer and coach. As each firm became stronger and more international it depended less on its group 'comrades'– except for one thing: their role as supportive shareholders protecting its managers from the pressures of less supportive ones, at the extreme from hostile takeover. That sets the stage for what American critics of Japan have called 'crony capitalism', in which a number of rather old men who know each other well (in Germany the Drips in Pinstripes of Guenther Ogger's (1991) scornful title) support each other's wish to be left in peace to run their own affairs – probably in a highly conservative manner.

That leaves another important stakeholder, the employees. The main threat to their influence is internationalisation. Co-determination is designed for national capitalism. It can cope with exporting, but once a firm becomes thoroughly multinational in its production operations it is very hard for employees to make co-determination work – put brutally, management can play one national group off against another.

To reinvigorate a multinational firm in stakeholder capitalism, the most obvious movement is one towards shareholder capitalism. It can get a quotation on the London and New York stock exchanges, drop (or at least attenuate) its mechanisms for maintaining minority control or avoiding takeover, and thus attract institutional investors of the Anglo-American type; as a number of the largest German firms have recently done.

The **state-led** corporate governance systems face difficulties in a globalising world economy similar to those of stakeholder capitalism, in that they are clearly designed for a national rather than multinational capitalism: the networks of co-ordination which they construct among large firms can hardly extend outside their boundaries. As Morin (2000) shows, the French system of cross-shareholding among large firms has been largely unwound. The state can therefore no longer add value by its co-ordinating role, and is much more likely to be seen in its familiar role of subtracting it. Another aspect of globalisation, first apparent in the European Union and now in the World Trade Organisation, is the increasing pressure against state subsidy and intervention generally. Privatisation now seems an unstoppable trend: which affects not only state-led capitalism but the state part of **family/state capitalism**.

If states, banks and cross-holding firms sell, *en masse*, who buys? The answer in the large-scale French privatisations was, foreign financial

institutions, mostly American and British pension funds, because private French capital was lacking. It was lacking because the French pension system is Pay As You Go, not funded. This deficiency obstructing the development of shareholder capitalism at one national level was resolved (not entirely to French satisfaction) because at the global level there was enough liquid capital generated by funded pension schemes. The more gradual movements in Germany and Japan have been much less dependent on foreign capital and largely accommodated by the growth of the equity holdings of domestic insurance companies, pension funds and investment funds (Juergens, Naumann, & Rupp, 2000).

No-one is arguing that **shareholder** capitalism is decaying. But there are powerful arguments that one of its key elements, indirect control, is in crisis. Monks and Sykes (2002) argue powerfully that (in the words of their title) Capitalism without Owners will Fail; which is nearly to say, indirect control (with or without a degree of management autonomy) does not work. In the UK, with a low degree of management autonomy, indirect control has created the sort of short-term pressures vividly described by Young and Scott (2004) which have given British-based large listed firms an unenviable record of low spending on innovation (Tylecote & Ramirez, 2006). British indirect control involves a clear preference for 'Exit' over 'Voice'. The skilled investor looks for just enough information about the firm and/or its sector to buy before good news comes out, and sell before bad. This is traditional 'active management' of a fund. In a big-listed firm, a large enough absolute stake to meet the costs of such investment management is a small enough percentage stake to leave it liquid. Such a posture would be compromised by directorships, and indeed by any engagement which gave inside, market-sensitive information, the recipient being legally forbidden to trade until such information became public. Engagement without non-executive directorships or similar insider-status is possible, as the (American) Capital group have demonstrated in the Anglo-Swedish pharmaceutical giant AstraZeneca (Ramirez & Tylecote, 2004). However, the British and (to a lesser extent) US investing tradition are against it.

Active management is however in crisis. The experience of the last decade in Britain and the United States demonstrates that (net of management costs) it gives lower returns than passive management (i.e. index-tracking portfolios which merely accumulate equities according to the firms' weight in the share price index). This is hardly surprising: active managers need 'mugs' – 'suckers' in American English – to buy when they are selling and sell when they are buying (Ramirez & Tylecote, 2004). With the virtual disappearance of the unskilled small investor, where are the mugs to be

found? Diamond is trying to cut diamond, and it is moving towards a zero-sum game; sub-zero, when management costs are subtracted.

Economic rationality would thus dictate a sharp change of course towards engagement, even up to the point of direct control; but the dominant 'players' in the British investment community have no such tradition, and lack the necessary expertise for real engagement. This explains the frenetic ill-informed interventionism of the City of London described by Young and Scott: in response to any disappointment with profits, actual or expected, the major institutional shareholders force through changes in top management and strategy, usually involving merger or demerger. Hedge funds, which can sell shares short as well as hold shares, are a new and powerful constituency with an interest in creating runs (i.e. speculative sharp declines) in firms' shares, which further increase pressures on management (Woolley, 2004).

The main difference between the City of London and Wall Street is, as we have seen, that the institutional investors in Wall Street are far less powerful: managers are much better able to protect their autonomy, controlling (but minority) shareholders much better able to protect their control. (Most pension funds belong to private firms and are open to pressure from other firms' top management: 'Keep your tanks off my lawn and I will keep my tanks off yours.' Further, the portfolios of the smaller pension funds, and mutual funds of all sizes, are generally externally managed by asset management houses belonging to investment banks like Merrill Lynch. Investment banks do much business for large firms, business any bank might lose were it known to tolerate interference by its asset managers in its customers' affairs.) Management autonomy, as in Enron, proved capable of producing scandal – but it was notable that the Sarbanes–Oxley act, passed in 2002 in response, was mainly devoted to improving the information available to shareholders (among other things, by creating savage penalties for management misinformation) – it did not give shareholders better opportunities to control management (Economist, 2005).

Shareholder capitalism has however more intelligent and effective responses. Private equity is one of them. The funds available to private equity are steadily increasing – both for venture capital, i.e. investment in genuinely new firms, and for buy-out (and similar) activities, i.e. investment in established enterprises. They are mostly coming from pension and mutual funds. Private equity *has* to engage: it invests in unlisted firms and takes large percentage stakes which are therefore not liquid. 'Exit' not being available, in Albert Hirschman's terms, 'Voice' must be used. Private equity firms typically supply non-executive directors to the firms in which they hold stakes, and these directors do direct: while venture capitalist directors have

traditionally, at least in US, taken an interest in the firm's operational strategy as well as its finances, this is increasingly the case also among private equity (BVCA, 2004; Global Insight, 2004; Centre for Management Buy-out Research (CMBOR), 2001). The evolution of buy-out equity's role in corporate governance is most interesting. The most famous buy-out case of the late 1980s was Kohlberg Kravis Roberts' (KKR) leveraged buy out bid for RJR Nabisco in 1988, famously described in the book *Barbarians at the Gate*. The role of KKR et al at this period was clearly seen as imposing the ideology of short-termist shareholder value on autonomous managers. In February 06, Henry Kravis, still in joint control of KKR, visited Germany to present a quite different face of buy-out equity (Economist, 2006b). With support from the CMBOR study, he presented it as supporting innovation, R&D and long-term investment generally.

Another source of engagement is employee shareholding. This is a far more flexible form of employee inclusion than co-determination, not much undermined by globalisation, and as such extremely popular in the United States in recent years. However, the same Enron scandal which exposed the weakness of so-called independent directors as guardians of shareholder interest, where engagement is lacking, also showed the dark side of employee shareholding: employees who as such have tied up considerable (human) capital in a firm, tie up more, of the financial variety, in the same firm, and thus become extremely vulnerable to its misfortunes. Blasi, Douglas, and Aaron (2003) argue that one answer to this problem is to extend share options throughout the workforce (as is already normal in ventured high-technology firms – Global Insight, 2004), since these carry only an upside, not a downside, risk. Another, if employees have acquired a major shareholding, may be to get it insured. At all events, large employee shareholdings are a fact of life in US industry, and a very clear option for other economies. Already by 1997, 10 out of the DAX30 (top 30) German firms had, for example, an employee share ownership programme (Juergens et al., 2000). Their Japanese counterparts were a long way ahead of them. Even in 1973, 61% of publicly traded Japanese firms had ESOPs; by 1989 the proportion was over 90%. (Weston, Mitchell, & Mulherin, 2004, citing Business Week, How Japan Perks up Productivity, August 28, 1995, p. 24.)

The effect of employee ownership on corporate governance is debatable, and certainly variable. What it does not often involve is substantial employee participation through the exercise of the voting rights of their shares. At 562 public US corporations, employees owned an average of 13% of the shares as of 1996, but they held board seats in fewer than a dozen (Weston et al., 2004, p. 393). Some forms of it, notably ESOPs (Employee Stock

Ownership Plans) allow the employees collectively to get involved in takeover protection by their shares being voted – normally at the discretion of the plan trustees, who are usually the company management; though according to Delaware law this must be agreed by the employees too (Blasi & Kruse, 1991). Conte, Blasi, Kruse and Jampani (1996) found that, though the financial returns of public companies with ESOPs are significantly higher than those of public companies without, they tend to decline after a firm has adopted an ESOP: consistent with the view that they are adopted as takeover defences. A study by Park and Song (1995) cited in Weston et al. p. 392 found that ESOP firms with large outside blockholders show improvement in performance; firms without them do not – and the higher the share of the ESOP in the latter, the worse the performance. This implies that when they are buttressing direct control against indirect control, their effect is beneficial; when they are buttressing management autonomy, it is not.

In United States practice, institutional shareholding in listed firms can also be engaged, as we have pointed out, though not usually involving directorships. Ramirez and Tylecote (2004) describe the role of Capital in Astrazeneca; Morin (2000) describes that of Fidelity in a number of French firms, notably Alcatel-Alsthom and Total. Yla-Anttila, Jyrki, and Martti (2005) extol the contribution of engaged American investors in Finnish firms.

We can now see a fork in the road for shareholder capitalism, in fact two related forks: engaged versus disengaged investment; more or less protection from takeover. The British option is disengagement without takeover protection. The predominant US option is high takeover protection (with some variation by state) and a wide variety of degrees and manner of engagement. Generally speaking the high-technology sectors and particularly the newer firms in them have most engagement and direct control. This version of American capitalism is more attractive for management elsewhere, than the finance-dominated British option. This is particularly the case for those migrating from stakeholder capitalism, since there are clear-cut similarities.

> The system of co-determination is seldom attacked openly by company management … a cynic might observe that German managers have ulterior motives for praising a system which serves as a protection for incumbent management against hostile takeovers … [a report published in 1998] concluded that 'Co-determination today is no longer questioned especially by the employer side'. (Juergens et al., 2000, p. 72.)

> 'A move by European managements to protect themselves has in fact been on the cards since a European Union takeover directive that set out to ban shark repellents ended up being heavily watered down chiefly by the German and Swedish governments. Whether member states adopt provisions banning poison pills is now optional. Some countries

> such as France have seized the opportunity provided by the directive to permit new anti-takeover devices. … In Japan, a wider dash for toxicity is taking place across the quoted corporate sector as long-standing cross-shareholdings run down and foreign shareholdings increase…. What we are now seeing, then, is an incipient process of convergence on the high-toxicity US system.' (Plender, 6/04/06.)

Clearly there will be many incumbent managements who grasp at every opportunity for takeover protection, with a view to protecting their own autonomy, with the effect of putting off necessary change. It should not be beyond the wit of policy-makers, however, to devise systems of company law which allow the entrenchment of control only by a strong bloc of engaged shareholders – no doubt including employees.

NOTES

1. By the same token Canada and Australia are excluded partly because of the strength of foreign multinationals there, and partly because they are not very different from Britain and/or the United States. The Netherlands is excluded partly because two of the three firms, which dominate its economy – Royal Dutch/Shell and Unilever, the third being Philips, are Anglo-Dutch.
2. It would also be appropriate to exclude it from the characterisation of company financing as involving a close involvement of banks (p. 108), and from that of industrial relations as cooperative (p. 107).
3. Of course the Japanese state has played a very forceful role in industry and an argument could be made for treating Japan as marginal between the business-coordinated and the government-coordinated categories.
4. But see below on the rights conceded voluntarily by large Japanese firms.
5. The legal rights of the Workers' Representative Congress (WRC) in each firm are extensive, and were in fact increased during the 1980s; but in reality the WRCs often do not even meet, and when they do, 'it is mostly … an opportunity for a party' (Cooke, 2005, p. 38). Likewise the employees are represented on the (supervisory) board of directors of limited companies, but without real power (Tylecote & Cai, 2004).
6. LaPorta et al. (1999) show the dominance of 'insider' systems in general; and this version of 'insider' systems is the most robust.
7. The 'right sort' were Anglicans (Church of England), the 'established' or 'state' church; the 'wrong sort' were the more extreme Protestants, who briefly held power after the Civil War of the 1640s, and were subsequently excluded from public office and the universities (Hill, 1967).
8. Since the Swiss cantons threw off aristocratic rule, most of them more than 500 years ago, they have had no nobility.
9. A figure from American legend who went to sleep under a bush and woke up twenty years later.
10. This is much assisted by the Swedish preference for long-term employment.
11. A number became models of good practice, such as the Electrolux acquisition of Zanussi, and the running of ABB, put together from ASEA (Wallenberg-controlled)

and the Swiss firm Brown Boveri; though the gloss has now been taken from that story and the career of ABB's CEO, then chairman, Percy Barnevik, by its recent performance (Hall, 2001).

12. This makes not a bad parallel with France, since the nursery of the French élite, the École Polytechnique, was set up by Napoleon to train military engineers.

13. A third ownership type which was set free at this time was collective enterprises, cooperatives which could be independent of all administrative levels. Data for them is normally given with T&V enterprises.

14. Clogs are wooden shoes, worn by the poor.

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AN EARLY APPROACH TO THE VARIETIES OF WORLD CAPITALISM: METHODOLOGICAL AND SUBSTANTIVE LESSONS FROM THE SENGHAAS/MENZEL-PROJECT ☆

Lars Mjøset

INTRODUCTION

Recurrent ''methodological disputes'' have haunted the social sciences, again and again polarizing the case-oriented quest for specification against

☆This essay is a reworked version of an earlier paper (Mjøset, 1992a). The present version focuses entirely on the development of a typology mapping varieties of world capitalism. The earlier paper is longer and contains more detail on the actual development of the Senghaas/Menzel project and on the shifting theoretical context in development studies as the project moved towards its final stage. It also contains a complete bibliography of the project publications until 1989. The most crucial difference between this version and the earlier (1992a) one, is that the evolution of the project is discussed with explicit reference to the methodology of grounded theory (Glaser & Strauss, 1967). While the methodological clarification has been updated, there has been no space or time available for a substantive update discussing how the Senghaas/Menzel framework holds up with in comparison with more recent work on the cases they covered.

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the natural science inspired quest for general, high-level theory. As a consequence, too much social science research is captured in either one of two vicious circles: ever more highly specified monographic case studies or preoccupation with periodically shifting general theories. The interaction of these two circles increases the risk of widespread amnesia: as social scientists are either bogged down in a stream of cases *or* flying high with the most recent grand (meta-)theories, social science forgets the actual empirical knowledge that is being meticulously created, maintained and revised in the daily handicraft carried out by a growing mass of researchers.

Regrets about the "gap between theory and empirical knowledge" reappear throughout the history of social science. But third alternatives, suggestions about how to overcome the polarization between "Geisteswissenschaften" and "Naturwissenschaften", are also part of this history. Over the last decades, we have seen a renaissance for such alternatives (cf. Mjøset, 2006b). Many labels may be applied, but in our setting, let us call this a turn towards grounded notions of theory (Mjøset, 2005). In the following, we shall explore some implications of this methodological turn for the research frontier on "varieties of capitalism", that has emerged in political economy over the same recent decades.

Overcoming the human versus natural sciences dichotomy is necessary in order to focus on what knowledge we actually possess in social science. The methodology of grounded theory points our attention to ways of accumulating knowledge that have been neglected both in standard and humanities-oriented methodologies. Two specific features of grounded theory are particularly relevant.

First, the emphasis on discovering theory makes the process of conceptualization transparent, all the way from the various data sources via concepts to the combination of concepts into theories. More often, concepts are simply taken for granted. Such non-transparent concepts tend to live their own life as the basis of ungrounded claims about mechanisms and processes.

Second, the notion of substantive grounded theory points to the role of typologies and periodization as means of systematic accumulation of knowledge on context and social processes (Mjøset, 2006c, 2006a, pp. 759–761). In most other methodological traditions, theory is conceived as formal. This leads to a top-down attitude towards empirical research. Context is something "empirical" being brought in "after" theoretical thinking! Also grounded theory has a notion of formal theory, but substantive theory has priority, while formal theory is discovered as explanatory patterns recurring in several different substantive research fields, or at least at different levels in

the same field. In grounded theory, the relation to empirical material is included from the very start and the idea of specifying the context (or scope) of generalizations is part of the process of discovering theory. The notion of formal grounded theory allows a reinterpretation of much discussed notions such as explanatory (causal) mechanisms. It brings "down-to-earth" a number of topics discussed in high-level social philosophical "theories of action" (Mjøset, 2006b, pp. 20–22).

Discussing substantive and formal grounded theory, Glaser and Strauss (1967, p. 34f) underline "that the formal theory we are talking about must be contrasted with 'grand' theory that is generated from logical assumptions and speculations about the 'oughts' of social life. […] substantive theory and formal theory is a design for the cumulative nature of knowledge and theory. The design involves a progressive building up from facts, through substantive to grounded formal theory."

In this perspective, the most important promise of the varieties of capitalism research frontier is its implicit plea for a comprehensive and systematic typological mapping of the *variety* of national capitalisms in the contemporary world. Such an interpretation will certainly be disputed: On the one hand, methodologists with a standard preference for natural science analogies will consider typologies as entirely descriptive classifications and demand that the study of varieties of capitalism be shored up in high-level theory. On the other hand, scholars pursuing social-philosophical methodologies will criticize the focus on nation states, demanding – in the name of totalizing interpretations of the present – a focus on globalization. These potential debates will not be pursued here. The problems concerning high-level general theories in social science have been discussed elsewhere (Mjøset, 2005, 2006b) and the following discussion is entirely at the middle level of grounded theory, with special attention to the typological component of substantive grounded theory.

We ask in this essay what earlier grounded research there is to rely on if we want to map the varieties of contemporary capitalism – worldwide. In the next 10 sections, we survey the sequence of projects carried out by German political scientists Dieter Senghaas and Ulrich Menzel between the mid-1970s and the mid-1980s. We show that their research can be interpreted as discovery of grounded theory, developing through four rounds of theoretical sampling of macro-historical cases of socio-economic development, leading to a final typology, considerations on mechanisms and social processes, as well as a set of quantitative indicators.

Senghaas/Menzel did not start out with an ambition to develop grounded theory. They never refer to that methodological literature, and as we shall

see, they were always tempted by a fairly common social science version of scientific realism. In line with pragmatist philosophy, grounded theory is quite sceptical of a ''realism of theories'' (Hacking, 1983) in which theory represents deep structures or driving forces. (The term deep structure stems from linguistics, where it denotes certain basic structures, which make the use of language possible for human beings.) However, what Senghaas/Menzel did in practice, fits the methodology of grounded theory better than any alternative methodology. We shall see that as their project progressed, there was a growing tension between claims about deep structures and reference to cases conceived as conjunctures. However, we shall also see that at the end, they fell back to deep structures. Despite this, there is a strong ''grounded'' current in all their work. The reason is probably that they were eager to develop what they call ''a practice-oriented theory''. Being practice-oriented, the theory would provide guidelines for development policies to be pursued by developing countries wanting to escape the vicious circles of under-development and neo-imperialism.

Table 1 provides an overview which distinguishes nine phases of the project: following problem formulation, an initial theory is drawn from S. Amin (for the broader background in Latin American dependency studies, see Mjøset, 1992a, pp. 97–99). Then follows four rounds of theoretical sampling, but inbetween the three first rounds of theoretical sampling, we find three rounds (called ''memos'') of conceptual and theoretical refinement. Amin's theory determines the first round of sampling, but it also leads to a first round of conceptual discussion, which is grounded in descriptive statistics and economic-historical material on several countries. The combined result of this (stylized as second memo) is the definition of the project's core category: ''autocentred development with world-market integration''. With reference to this core category, a number of historical cases are sampled (second round). This leads to two lists of explanatory factors (third memo), which again leads to two rounds of sampling: the third round considers some cases from the first round (with additions), and the fourth leads to analysis of two crucial contemporary cases. After these sequences of sampling and conceptualization, Senghaas/Menzel reach the stage where they can integrate their concepts into both substantive and formal grounded theory of autocentred development despite world market integration. This final theory differs strongly from the initial theory. The table very briefly notes various characteristics of the nine phases, and there will be further specified in separate sections (corresponding to Table 1) below.

Table 1. A Stylized Reconstruction of the Senghaas/Menzel-Project.

Theory/Concepts	Typology	Empirical Input	Mechanisms	Deep Structure	Further Research
1. Problem formulation Dependence north/south: Growth≠development					What lessons for developing countries?
2. Initial theory Drawn from Amin, cf. Fig. 1	Core/periphery, socialist/capitalist	Amin's African case studies	Table 2	The capitalist world economy	Delinking, self-reliance, regional cooperation
3. First round of theoretical sampling Drawn from Amin, cf. Fig. 2		Brazil, Japan; Socialist developing countries			Role of the pre-colonial context
4. First memo – conceptual discussion Peripherization-pressure cf. Fig. 3	Table 3			Two types of development: Autocentred vs. peripheral	Also historical cases can be sampled
5. Second memo – defining a core category Autocentred development despite world market links					Internal social structural preconditions
6. Second round of theoretical sampling		Small success cases in the European 19th century periphery	Embedded in explanatory accounts of the various cases	Egalitarian distribution of agrarian resources and income	What relevance for contemporary cases?

Table 1. (*Continued*)

Theory/Concepts	Typology	Empirical Input	Mechanisms	Deep Structure	Further Research
7. Third memo – list of explanatory factors					
		Stratified lists sort the various explanatory factors	Specification of mechanisms based on the lists	National legacies as deep structures?	Can contemporary cases be analysed with reference to the lists?
8. Third round of theoretical sampling					
	Typology of postwar socialist cases	Socialist developing countries and other socialist countries	Mechanisms related to political mobilization and participation	Politically induced economic problems	Problems of autocratic rule also relevant to state capitalist cases?
9. Fourth round of theoretical sampling					
		Contemporary success cases East Asian NICs			Problems of state-led development
10. Integration of theory					
	Table 6; final typology in Table 7	List of indicators (Table 8)	Vicious and virtuous circles (Figs. 4–5)	Multiplication of deep structures	How to generalize?

PROBLEM FORMULATION – HOW CAN PRESENT-DAY DEVELOPING COUNTRIES ACHIEVE GROWTH *AND* DEVELOPMENT?

The methodology of grounded theory is mostly presented with reference to research methods such as fieldwork (especially participant observation) and unstructured interviewing. But it works as well in empirical studies based on archival materials, documents and monographic studies. More generally, then, grounded theory is relevant in cases where the research starts from a *research problem* that requires the researcher to consult a wide set of empirical sources and (often seemingly unconnected) grounded theories.

This can be contrasted to research which starts from other points of departure: a researcher may start a project empirically from a given data set, employing quantitative techniques, or a researcher may start from a collection of texts to be interpreted, using the techniques of discourse analysis. Other starting points may be of an entirely theoretical nature: a neoclassical economist may start from a model which is developed as a thought experiment, or a social philosopher may start from some set of (older or modern) classics with a view to securing the "conditions of possibility" of social science, extending this to an interpretation of modernity.

From the point of view of grounded theory, these alternative points of departure can easily lead the researchers in an *ungrounded* direction, since they all deflect attention from the context of interaction, the specific historical situation. Researchers who move in this direction tend to strive towards some high theory ideal, while the promise of grounded theorists is more modest: generalize only as far as the context allows us (Mjøset, 2006a).

The process of separating grounded and ungrounded elements requires *both* empirical investigations based on *theoretical sampling* of further cases *and* sociology of knowledge reflection on the situation of researchers in specific historical contexts. The notion of theoretical sampling and the technique of writing "theoretical memos" are crucial ingredients in grounded theory (Corbin & Strauss, 1998). Theoretical sampling is the further sampling of cases based on the theoretical results so far achieved. In theoretical memos the researcher "puts down theoretical questions, hypotheses, summary of codes" (Strauss, 1987, pp. 22, 127f). They are means to develop "sensitizing concepts" (Blumer, 1969). Several of Senghaas/Menzel's published papers contain sections that serve the same purpose as the (unpublished) memos in grounded theory. In the following, we use these notions to spell out the logic of Senghaas/Menzel's research project.

Senghaas and Menzel's research problem was why some countries experience not just economic growth, but socio-economic development, while others remain trapped in underdevelopment, where the broad masses of the population experience no substantial welfare gains. They wanted their "practice-oriented theory" to contribute to learning: they explored what lessons present-day developing countries could draw from various contemporary and historical development experiences.

THEORETICAL POINT OF DEPARTURE

In the 1960s and early 1970s, a local research frontier already existed around the problem of development. The frontier was, however, quite divided due to a number of political and public sphere concerns. In particular, several varieties of dependency theory challenged the modernization theories of the 1950s and 1960s (Mjøset, 1992a, p. 99). Senghaas/Menzel chose to rely on one specific contribution within the available dependency literature on development: Amin's (1972, 1973) theory of peripheral capitalism. While the concepts of development and economic growth were and are used broadly in many social science disciplines, Amin's theory equipped Senghaas and Menzel with certain specific notions: autocentred and peripheral development.

Amin specifies these concepts in terms of a simple economic model of reproduction, in which the total output of an economy flows into four sectors (Fig. 1). The autocentred case can be modelled as a closed economy: the connection between sectors 2 and 4 dominates the economy. The peripheral case, however, must be modelled as an open one: sector 1 (exports, above all of certain staples) dominates, and the proceeds from that sector are largely spent on luxury goods, out of which a large share is imported. Thus, while the 1-3-connection is strong, the 2-4-connection is very weak.

Amin holds that the autocentred model corresponds to the "pure" model of capitalism analysed by Marx, typical of historical developments in

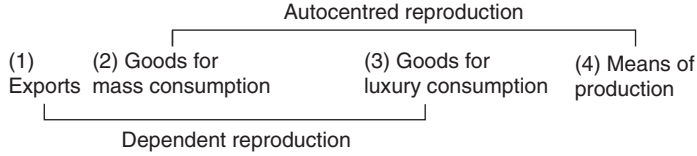

Fig. 1. Amin's Scheme of Reproduction.

Europe, and even in North America and Japan, that is, in all the central capitalist countries of the 19th and 20th century. In dependency theory, this is the cluster of countries called the capitalist centre or core. Unlike most dependency-theorists (such writers as Frank, Galtung and Wallerstein), Amin holds that this type of capitalist development can be regarded as a closed one: the "essential" relations of this system can be grasped independently of external influences, it is *autocentred*! But Amin shares the dependency view of the periphery: here seemingly endogenous factors are the product of exogenous forces. This defines his second variety of capitalism: peripheral capitalism.

The peripheral model of capitalism developed in response to the centre's need to import primary products. Capitalists of the core undertook investments to the extent that they could get either raw materials or foodstuffs at a lower cost than in the core. If there is a world market price, such a cost difference may depend on higher productivity (e.g. for natural reasons) or on lower wages. Abstracting from productivity, Amin (1972, p. 94) notes that in the peripheral case, several mechanisms are at work to ensure low wages in the export sector. Inbetween employment and open unemployment one finds a shifting spectrum of e.g. underemployment, high turnover rates, and independent employment in low-productivity activities.

To the extent that these mechanisms prevail, society looses its traditional, precapitalist nature. But no substantive domestic market is created. Rather, modes of production that were formerly "pre-capitalist" are reproduced. In the autocentred type, the capitalist mode of production eliminates other modes, while in the peripheral type, capitalist development is blocked by the influence of the centre, and therefore pre-capitalist modes are reproduced or conserved. Senghaas (1979b, p. 386) thus calls it "crypto-capitalism". Thus, a basic connection in the autocentred type, the productivity-indexed real wage, is absent. The autocentred type implies an equalization of levels of productivity, patterns of work organization, profit rates and wage levels. Such an equalization is absent in the periphery. The periphery attracts only certain investments and its domestic market is very limited. Amin also conceptualizes this situation as *structural heterogeneity*, with reference to structural defects such as the lack of linkages between agriculture and industry, no depth of production, incomplete input/output-structures, the fact that internal demand for food cannot be satisfied, and demographic developments that are out of control. This constellation also has political consequences: Elites become very rich, since income inequalities are larger than in the core. Such local rulers defend their privileges, above all by means of militarization (Senghaas, 1977, Ch. 9).

Table 2 summarizes the mechanisms analysed by Amin, that is: how productive forces, domestic markets, sectoral connections, population/employment dynamics, wage formation, as well as formation of political consciousness interact in different ways in each of the two types.

Amin's theory supports a major distinction in development theory: the distinction between economic growth and social development. The autocentred case combines the two; the peripheral one does not. Amin sees the features of the peripheral type as fundamental deficiencies: as long as third world countries linked up with the international division of labour, these factors arise, irrespective of political regime, whether proclaimed socialist or post-colonial capitalist. These deficiencies serve to block a type of economic growth which implies development, that is abolition of marginalization, specified as satisfaction of basic needs, abolition of poverty, and provision of full employment. These countries have experienced economic growth in the postwar era, but not broadly based, only in certain sectors, and with increasing inequalities: *growth without development*. Such a peripheral constellation of "growth created and maintained from the outside" lacks any trend towards "self-centred national development, moved by its own internal dynamism" (quoted from Amin in Foster-Carter, 1980, p. 12).

Amin's systematic account of these mechanisms was grounded in two ways. First, it was based on case studies of the economic development of a number of West and North African post-colonial states (Foster-Carter, 1980). Second, it was also grounded in Amin's analysis of the transformation of the world economy under the impact of an increasingly rich and powerful core of Western countries that proved eager to secure cheap foodstuffs and raw materials to their increasingly productive industrial sectors.

But Amin also retained elements of a philosophy of history that tended to "unground" his theory. As one of the first third world Marxist economists, Amin revised older Marxist accounts of capitalism's historical development in order to account for the underdevelopment of postcolonial economies in the postwar third world. Nineteenth century capitalism had the "civilizing mission" of establishing an autocentred model of economic development, but in the postwar 20th century, a transition to that model was only possible under socialist conditions. As Fig. 2 indicates, the decolonized export-economies faced the dilemma of continued peripheral development (capitalism with no "civilizing" effects) or delinking from the neo-colonialist world economy. Furthermore, Amin claimed that the technology gap between the first and the third world in the 20th century had grown so wide that export-oriented catching up by poorer countries was now impossible (while such cases could be found in the 19th century). The distinction between pioneers

Table 2. Amin's Dichotomy.

	Autocentred	Peripheral (Structural Heterogeneity)
Development of productive forces	Homogenous	Heterogeneous, i.e. advanced in the modern sector, but backward in the traditional sector
Domestic market	Favouring products related to mass consumption	Favouring products related to luxury consumption (demand emerging among elites in their direct or indirect relations to the modern sector)
Sectoral connections and relation to agriculture	Durable consumer goods rely on a preceding industrialization of simpler consumer products as well as on a modernization of agriculture. The central country either developed its own sector for investment goods, or succeeded in a process of import substitution	The enclave export-sector spurs luxury consumption. Import substitution starts late and with durable consumer goods, i.e. the latest generation of core consumer goods. Thus, the domestic producers of simpler mass consumption goods are not stimulated to modernize. Production of basic foodstuffs, including the agricultural sector, stagnates. Industries do not become growth poles, but reinforce domestic inequalities. To the extent there are basic industries, they are supported by the state, and related to exports and luxury products, not to mass consumer goods
Population and employment dynamics	The broad masses of the population are integrated into the accumulation model. Cyclical crises of unemployment are replaced by "Keynesian" full employment-oriented economic management	The broad masses are marginalized. There is a secular increase of unemployment/and numerous varieties of under-employment (impossible to trace in statistical terms). These conditions secure a low wage

Table 2. (*Continued*)

	Autocentred	Peripheral (Structural Heterogeneity)
Wages	Origins of demand are the masses. Wages are high, they count as a crucial demand factor	Wages are a cost-factor only. In the modern sector they are very low, in the traditional sector they are at subsistence level, or there is a natural economy. The poverty of the masses is a condition for the integration of a minority in the world system. The elites emulate European or American ways of life. There is development only for the minority, not development for the masses
Political consciousness	Reformism in the working class	Reformist consciousness is not possible in the periphery, since the system does not integrate, but marginalize the masses

Source: Amin (1972), Senghaas (1979a), and Senghaas (1982, Ch. 7).

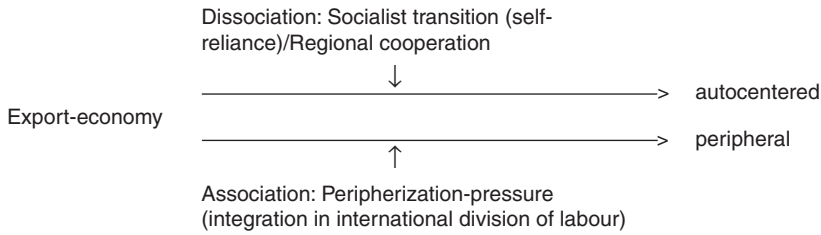

Fig. 2. Development Alternatives under 20th Century Post-Colonial Conditions According to Amin.

and latecomers had thus become a structural feature of the capitalist world-economy.

FIRST ROUND OF THEORETICAL SAMPLING – CONTEMPORARY SOCIALIST DEVELOPING STATES

Starting from Amin's theory, Senghaas/Menzel set out to see how grounded it was. The first round of theoretical sampling of cases for analysis naturally focused on the countries that in the postwar period had delinked from the world economy, the critical subjects of Amin's theory. Senghaas put his group to work on these cases: China (Menzel, 1978, 1979), North Korea (Wontroba & Menzel 1978; Juttka-Reisse, 1979), Albania (Russ, 1979) and Cuba (Fabian, 1981).

For his own first book on these matters, Senghaas (1977) related to Amin's theory by sampling one case from each of the two types of capitalist development: Japan was analysed as a country that was exposed to the dangers of peripherization, but which quite early followed a dissociative strategy, thereby securing autocentred development. Brazil was analysed as the contrast case.

With some qualifications, the in-depth studies of China, North-Korea, Albania and Cuba confirmed indications that these socialist developing countries in a few postwar decades had been able to counteract the most vicious traits of underdevelopment and marginalization (illiteracy, hunger, malnourishment and unemployment) known from the capitalist periphery. Senghaas concluded in 1977/1978 that the post-1950 division between North and South Korea was clearly one between a North-Korean autocentred model and a South-Korean model based on full integration into the

capitalist world economy. The latter, Senghaas (preface to Wontroba & Menzel, 1978, pp. XV, XX; and preface to Russ, 1979, pp. VII, X) at that time claimed was locked up in structural heterogeneity (peripheral reproduction). Senghaas later (in preface to Menzel, 1985, p. 18) explicitly characterized this conclusion as "premature".

A more lasting insight from the first round of theoretical sampling was that the historical origins of a country mattered. Analysing Korea, the researchers employed another notion of Amin's, that of a tributary mode of production. Concerning Albania, which had only experienced a short spell of Italian colonialism, they raised the question of whether that country had been underdeveloped at all. Rather than a peripheral economy that had been underdeveloped by a strong core, it was perhaps an "undeveloped" country. Senghaas concluded that it would be important to include the different pre-colonial contexts in a systematic comparative analysis of contemporary peripheral social formations.

But before we consider Senghaas/Menzel's next round of theoretical sampling, we must take into account that a theoretical starting point can be revised with reference to other kinds of considerations than in-depth case studies. In fact, Senghaas/Menzel engaged in conceptual considerations that went beyond the few cases they had sampled. These conceptual considerations can be seen as efforts to question ungrounded elements in Amin's implied philosophy of history.

FIRST MEMO – CONCEPTUAL DISCUSSION

Indeed, from the outset, Senghaas had drawn on other sources than the Marxist tradition. His background was in Anglo-American political science, influenced by the recent "structural theory of imperialism" in peace research (see Mjøset, 1992a, p. 97). Senghaas (1977) also saw the parallels between dependency theory and the German historical school tradition, especially Friedrich List's (cf. Senghaas, 1991) older work on how latecoming countries could catch up by strategic use of tariffs to protect infant industries. List generalized the German and U.S. experiences. This helped Menzel/Senghaas to be explicit about the fact that historically, there were also cases of partial delinking on the part of larger *capitalist* countries.

Amin provided a philosophy of history account of where the world-economy was heading, one which allowed him to identify the marginalized masses of the third world as basis of critical social movements that would be the driving forces behind a change towards autocentred development.

Senghaas/Menzel were interested in cases from which contemporary developing countries could learn. They were not specific about who would learn: it might even be forces *within* third world states, certain political parties, fractions within the ruling elites, not just social movements.

In some of their writings, Senghaas/Menzel tried their way with a modified philosophy of history, one which did not relate to a socialism/capitalism-dualism, but retained Amin's idea of a growing technology gap. According to the famous Gerschenkron (1966) thesis, there is a secular trend towards more state intervention, a growing politization and degree of state intervention, as we approach the contemporary situation (Senghaas, 1982, Ch.1, Sect. 3). Autocentred development has become an "ever more difficult and politicized affair, the further one proceeds to the present. (…) In the last sixty years there has been no single country which has reached any degree of overall coherence, viability and maturity without dissociating from the prevailing mechanisms of the world market" (Senghaas, 1981, p. 49, cf. Menzel & Senghaas, 1983 for a longer version). Unlike Amin, they hold that such state intervention need not necessarily take the form of a socialist planned economy, it might as well take the form of state capitalism, which retains competitive markets and capitalist ownership patterns. The Listian strategy should still be possible, socialism was no necessity!

Thus, Amin's simple alternatives break down. Senghaas/Menzel have to establish a more subtle typology of how countries had integrated into the international economy. This typology was not primarily the result of in-depth case studies, but of summary readings of economic historical literature about the trade policies of as many countries as possible. The results (specified according to period) were coded with reference to the autocentred/peripheral dichotomy (Fig. 2), and then related to a list – replacing the association/dissociation dichotomy (Fig. 2) – of five different patterns of trade integration in the world economy. The typology (Table 3) includes both the early starters and state-capitalist cases.

As for the earliest industrializers, these developed primarily due to internal dynamics, but with some degree of dissociation (type I). The same, they claim, was the case with the state capitalist developers since the late 19th century (type IV). A number of both European and third world cases had pursued policies of association (type II), but another large group of cases had combined association and dissociation (type III). Finally, a group of eastern cases had first dissociated, then partly associated (type V).

Type V includes Amin's paradigm cases of delinking from the post-war world economy. As for I and IV, the label "primacy of internal dynamics" indicates that these countries were either relieved of too strong

Table 3. Patterns of World Economic Integration and Resulting Development Pattern.

Pattern of Integration in the World-Economy	Autocentred	Peripheral
I. Primacy of internal dynamics: private market economy	Belgium (1820–1960) France (19th century) Austria Germany	
II. Associative	Switzerland (The Netherlands) Belgium (1860–)	Portugal (1703–) Ireland (1814–1930) Latin America (1840–1930) Africa (1880–1965) Asia (1880–1965)
III. Associative/Dissociative	The Nordic countries (from 1860/1980) Settler colonies: Canada Australia, New Zeeland; USA (before 1860)	Portugal (1880–) Spain (1880–1937) Ireland (1930–) Latin America (1930–) Africa (1965–) Asia (1965–)
IV. Primacy of internal dynamics: state capitalism	Japan (1868–) Russia (1880–) Italy (1890–) Hungary (1880–)	India (1947–)
V. Dissociative, Dissociative/Associative	The USSR (1917–) The Eastern bloc and the socialist developing countries (1945–)	

Note: The typology is modified. Ireland has been added.
Source: Senghaas and Menzel (1979a), Senghaas (1981, p. 46), and Menzel and Senghaas (1983).

external challenges (type I) or were cases of successful state capitalism (type IV).

As for Japan, it was no longer just seen as an early developer, but also as a case of state capitalism. The notion of an active, interventionist state was no longer seen just as a feature of socialist economic organization. Senghaas still keeps Germany with the early developers, but one may discuss whether it also has important feature common with the state capitalist cases.

Since it turned out that autocentred development could be achieved in cases of partial dissociation, a notion of *critical periods* became important. The notion of a *take off* (into self-sustained growth) was well known in

modernization theory (Rostow, 1960). The notion of critical periods is similar, but comes via dependency theory, and is thus related to the problems that may arise from integration in the world economy, problems disregarded by modernization theory. In a critical period, the longer-term fate of a developing country is decided: it may embark on autocentred development, but it may also fail to do so. Thus, Brazil's (Senghaas, 1977) fate had obviously been sealed in the decades before 1930, so its turn to dissociation in the later inter-war period happened after its critical period, and could not alter its peripheral development path.

But Senghaas/Menzel also became aware of size as an important factor. This led them to modify even their Gerschenkronian version of the idea of a widening technology gap. The technology/competence gap was still a challenge to be tackled, but they found that at any point in historical time, the significance of the technology gap would vary with size: it would be more of a problem for smaller than for larger countries.

In Table 3, types II, III and IV involve some sort of association or some sort of capitalist organization. All of them contain *both* autocentred and peripheral cases of development. The *explanation* of both successes and failures thus could not be sought mainly in a country's of integration into the world economy.

Senghaas/Menzel therefore reconceptualized integration in the world economy in a way that broke with Amin's view that external pressure determines internal conditions. Internal conditions are determined by more factors than just colonial or neo-colonial ties. Instead of the earlier direct link from the world economy to type of development, Senghaas/Menzel focused on the internal development of capabilities and institutions. While in Amin's view, capitalism eradicates any historical legacy, creating either homogeneity or heterogeneity, Senghaas/Menzel gave historical legacies a more autonomous role. Unlike in Amin, *even underdevelopment* – not just success, but also *failure* in development – was to be understood basically with reference to internal forces. They see internal features as generally decisive, both in the first and in the third world. Not only autocentred, but also peripheral development is mainly due to domestic forces: "the success or failure of development processes very much depends on *internal* socio-political conditions, and if these work against overall development, not even the best international setting would be good enough to overcome such obstacles" (Senghaas, 1981, p. 51). Historical legacy and the state mattered more, and the depth of the technology gap less. The challenge now was to see in which precise respects it mattered. Furthermore, since autocentred development was possible in open economies, socialist self-reliance was rejected as the "norm".

In sum, Senghaas/Menzel were less and less interested in Amin's claim about secular trends and structural features of the world economy. As a consequence, they coined their own term, that of *peripherization pressure*, disconnected from the linear notion of the increasing technology gap and the external structural determinism. They considered it a permanent force in all historical phases of modern capitalism, a force that any country must tackle. How a country tackles it depends on internal, historically evolved conditions. Peripherization pressure is felt once a country starts to supply raw materials to more developed regions of the world economy. Thus, while they retain a role for the world economy, they move away from seeing it as a driving force that restructures the historical point of departure creating the heterogeneity that haunts the peripheral type. Development/underdevelopment depends on the internal situation.

Peripherization pressure is one factor in a conjuncture of factors. It impacts on a constellation of factors at the "domestic" side, and other elements in that same conjuncture – state elites and economic actors within a territorial unit – can regard peripherization-pressure as a challenge. The difference between this view and that of Amin comes out in a comparison of Figs. 2 and 3 (see Amin, 1988 for his response.)

Given these theoretical revisions, Senghaas/Menzel revised their views as to what the deep structure of development was. In Marx' theory, capitalism is the central category, in Amin it is the capitalist world economy, but in Senghaas/Menzel – in the end – it becomes *development*. Their commitment to the Marxist tradition was not strong, so it was not important that there should be one deep structure of capitalism versus another one typical of socialism. Rather, they allowed the distinction between autocentred and peripheral development to cut across the Marxist capitalism/socialism divide. Thus, they turned the two models of development into deep structures, using expressions such as: "the identity of the deep structure of different types of peripheral economies" (Senghaas, 1977, pp. 14–15). They declare as an internal deep structure what dependency wanted to regard as produced by an international deep structure. Unlike Marx, there was no longer a basic

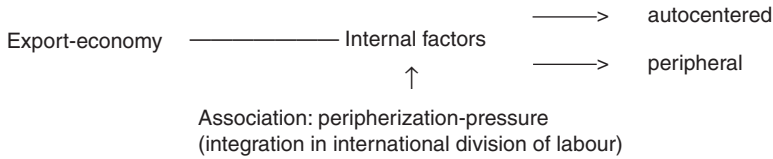

Fig. 3. Development Alternatives According to Senghaas/Menzel.

deep structure of capitalism. Unlike Amin, the outcome of integration in the world economy was no longer clear-cut! Autocentred and peripheral developments were now regarded as two deep structures.

SECOND MEMO – DEFINING THE CORE CATEGORY OF AUTOCENTRED DEVELOPMENT

When the early developer/latecomer distinction is deemphasized, *and* peripherization pressure does not increase in a secular way, while small size may mean stronger peripherization pressure, *then* one can study *historical* cases of transition, focusing on the critical phases. Unlike contemporary cases, the development of these historical cases was finished, their critical phases were closed chapters and could be studied as wholes.

Senghaas/Menzel thus took a broader historical look. They no longer considered early 19th century European development experiences simply as cases of early development. Even in that setting one could observe a capitalist world economy with a core exerting peripherization pressure on a periphery, a periphery that was in itself European. Senghaas/Menzel became aware of a study by the two Hungarian economic historians Berend and Ranki (1980a, 1980b) who compared the fate of the countries on the 19th century European periphery.

It was clear that – in Table 3 – II and III were the most surprising types, and especially the smaller ones among them. Following Senghaas/Menzel's conceptual revisions, the success of these countries – especially the small ones – would have to be explained in other ways than with reference to early development. Type II indicated that at least some small countries had achieved an autocentred pattern despite full integration in the world economy (Senghaas, 1982, Ch.1, Sect. 4). Senghaas/Menzel particularly mention Switzerland, a small country of two million inhabitants, exposed to quite extensive British pressure in the period 1760–1840. Still Switzerland must be judged as a case of autocentred development. Belgium had a similar experience. Still, most of the Type II countries are classified as cases of peripheral development. Type III countries, however, mixing elements of liberalization and protection, displayed a larger number of successful cases.

Senghaas/Menzel thus specified these cases through the category of "autocentred development despite world market integration", that is growth *and* development, despite a particularly strong external peripherization pressure. All successful types II and III countries had, at least partly, during some period of their critical phase, associated with the capitalist world

economy. Still they had successfully made the transition from export economies to coherent national economies. Here was a core category (Strauss, 1987, p. 34ff), a focal point for the discovery of grounded theory. This concept specified the experience of the autocentred cases within types II and III! What was it – ''inside'' these countries – that enabled them to resist peripherization pressure, or even: to turn such pressure to their own advantage by being able to develop in response to it?

SECOND ROUND OF THEORETICAL SAMPLING – HISTORICAL CASES

Further theoretical sampling was now based on the more subtle typology (Table 3) and on the conceptual specifications related to the core category. The sampled countries would be studied in their ''critical early phases'', focusing on the ''preconditions and processes characterizing development trajectories which do not lead to peripherization''. More precisely, the focus was on ''the condition for effective counter-management in a situation of threatening peripherization by potential metropoles within a hierarchically ordered international economy'' (Senghaas & Menzel, 1979b, p. 288).

Senghaas/Menzel mostly sampled success cases. In-depth studies were combined with empirical material drawn from broader economic history accounts, with a wish to generalize across types II and III cases. The aim was to investigate the constellations of factors that explained autocentred development of small countries despite world market integration. A very detailed study undertaken by Menzel (published 1988) studied the transition to an autocentred development pattern in the critical periods of three successful type III cases: Canada, Denmark and Sweden as well as in one type II country, Switzerland. Senghaas published a more synthetic book, relying partly on Menzel's larger study, but also on two case studies of open, export-oriented economies that succeeded in tackling peripherization pressure (Senghaas, 1982, Chs. 2, 3). Above all, Senghaas investigated type III countries.

In Berend/Ranki's (1980a, 1980b) analysis, the small Nordic countries stood out. Although they were vulnerable to competitive pressures arising from the world market (trade flows, the demand for raw materials and foodstuffs to the core economies), they were the most successful postwar small export economies of the OECD area. Senghaas' (1982, Ch. 2) first case study dealt with these Nordic countries: how could it be that they had not been trapped in their early peripheral positions, but had countered further

peripherization-pressure, so that by the inter-war/postwar period, their pattern of development was clearly autocentred?

These type III countries had first associated to the world market by exporting their various staples: agrarian and mineral raw materials. Export incomes allowed them to import processed consumer goods and machinery. In a second phase, their infant industries were protected by dissociative policies. This ensured import-substitution industrialization. Export-orientation was not incompatible with autocentred development: ''Once import-substitution industrialization succeeded, they began to export not only unprocessed agrarian and mineral raw materials but also processed consumer goods, and later on also producer goods'' (1981, p. 45f).

The specified explanation starts from the dynamics of industrial development (Senghaas, 1982, pp. 135–138 and pp. 89–92). For the initial association to world markets via raw materials, they find that Hirschman's (1977) theory of linkages demonstrates the potential for selective industrialization in close interaction with the staple exports. Given their conceptual reorientation, Senghaas/Menzel starts to build a more grounded theory, selecting elements from the development research frontier that they had not paid much attention to earlier: Hirschman's theory is a case in point. Also the theory of how small countries may establish successful export activities in certain niches of the world market was important (Menzel, 1988, p. 582, with reference to Hildebrand, 1975).

While Amin saw raw materials export industries as export enclaves only, Senghaas/Menzel's focus was on linkages extending from such raw materials exports. The nature of a country's staple exports depends on geographical and climatic conditions. Among the Nordic countries, Denmark's main staple exports have been agricultural products, while Norway, Finland and Sweden all have relied on forest products, Norway and Iceland also on North-Atlantic fish and Sweden also on its rich mineral ore deposits. Although these features are linked to basic resource endowments, they are not fundamental in an explanatory sense. Rather, the fact that these conditions have been utilized in a way that barred peripheral development must be explained by the social and political factors that Senghaas/Menzel regard as internal ones.

They are well aware that there is no automatism in the extension of linkages from natural endowments. They regard linkages as a potential that will be activated depending on social preconditions (Senghaas, 1982; p. 249 and p. 163; Menzel, 1988, p. 560). Realization of this potential gives rise to a progressive ''maturing process'', which bolsters the transformation from an export economy to a coherent national economy. Linkages represent

barriers to entry, they involve competences which defend the national production system despite the integration in a world economy of stronger competitors. Forward linkages indicate industrial development which leads to increasing export shares of products further out in the chain of products, e.g. paper and pulp or planed wood rather than just timber. Backward linkages indicate industrial development which leads to increasing export shares of updated manufactured products related to exports of raw materials, e.g. paper-/pulp-machinery rather than just timber/pulp/paper.

As backward and forward linkages spread, the export sector is stripped of its enclave nature, and a substantive domestic market (*final demand linkages*) is established. The state is able to get its finances in order, contributing to the integration of the national economy by infrastructural investments (*fiscal linkages*). Autocentred development implies that an increasing number of the various linkage types play themselves out inside the national economy (Menzel, 1988, p. 552).

In order to explain why such a process of linkage extension takes place, the challenge is obviously to spell out exactly those social preconditions that trigger the linkage potential of a developing economy. Besides their analysis of success cases, Senghaas/Menzel also made some comparisons to failure cases, but less systematically. There was no monograph like Menzel (1988) on cases of peripheral development. Only in chapter 3 of Senghaas' (1982) book, the success case generalizations were compared to failure case experiences. Senghaas presented a number of paired comparisons and discussed a few of them with various degrees of precision. The most developed comparison was that between Denmark and Uruguay, and he notes that he could just as well have studied "Denmark and Ireland, the Netherlands and Portugal, Norway and Greece, Sweden and Spain, Finland and Rumania" (Senghaas, 1982, p. 147). Portraying the less successful cases, many of Amin's mechanisms of peripheral developments were confirmed, specified along properties defined in the study of the success-cases.

Let us first turn to the socio-economic factors (cf. Table 4 below): The first set of such factors relates to the distribution of property, resources and income. In the Nordic countries, rural incomes were broadly spread, and import substitution became "broadly effective". The relatively egalitarian distribution of holdings caused increasing incomes from exports and productivity increases to trickle down on large groups of the population, generating a home market, despite the small population. This mechanism was emphasized throughout the rest of the project. For instance, among the quite poor Norwegian farmers, some cash income flowed from part-time employment either in the fisheries or in forest-work, and these incomes

Table 4. Socio-Economic Factors Explaining Autocentred Development.

Area	Factors	Nature of Factors Conducive to Autocentred Development
Agrarian property	• Distribution of land holdings size of farms, legal status of peasants	• All distributions are relatively "egalitatarian" (or marked by only"moderate inequality"), that is: approaching the normal curve. (Self-owning family farms.)
	• Share of land occupied by holdings of different sizes	
	• Pattern of ownership of other re-sources (forests, minerals, fish, etc.)	
	• Innovation-orientation of farmers (Link to non-agrarian economic sectors: manufacturing)	• High innovation orientation (Rather than size as such, the crucial feature is the intensity of farming and the degree of mechanization, i.e. the productivities of land and labour, this is spurred by egalitarian distribution.)
	• Cooperatives	• Strong cooperative movement (both sales and inputs). This counteracts income concentration among merchant capitalists. Family farms benefits and gains technical competence
Distributional patterns	• Distribution of income	• Same as above (only "moderate inequality"); influences the dynamics of the domestic market (contributes to "homogenous social structure"
	• The relation between the distribution of income and the savings rate	• The savings rate must be such that productive investments are allowed
	• The relation between the distribution of income and the demand for investment goods	• The domestic market must be sufficiently stimulated
	• The share of wages and salaries in the net national product	• Relatively high (especially due to strong union movements and/or restrictive immigration policies)

Table 4. (*Continued*)

Area	Factors	Nature of Factors Conducive to Autocentred Development
Economic institutions (affecting the quality of the firms)	Firms	
	• Risk-oriented entrepreneurs/ firms	• Industrial interests, gaining hegemony over traditional elite groups (related to social and political mobilization)
	Financial system	
	• Banking system	• Supportive of these firms
	Innovation	
	• Nature of national innovation system at the firm level	• Able to mix collaboration and competition, to absorb information and new technologies, to innovate in times of crisis
	Education and Training	
	• Level of education (cf. state)	• High (early high level of literacy)
	• Quality of institutions for higher education (cf. state)	• High quality, and dense connections to firms

Source: Senghaas (1982, p. 136f and p. 90f) and Menzel (1988, p. 561f). Modified and extended.

contributed to the multiplication of linkages within the national economy. This trickle down process produced an early and radical transformation of the agrarian structure, so that farmers favoured modernization of agriculture. The evolving domestic market was sustained by a certain minimum of purchasing power among the broad strata of the population: a number of small manufacturing firms catered to this demand. Import-substitution did not require extreme degrees of protection.

Let us briefly illustrate how the first set of factors also can be combined into analysis of dynamic development sequences during the critical phase. As long as a rudimentary autocentred pattern been established, peripheralizing trends are counteracted: price competition from stronger competitors lead to "innovative responses" (Senghaas, 1982, p. 135 and p. 89; cf. Levin, 1960; Smith & Toye, 1979). The capacities of the country are systematically organized in what the neo-schumpeterians call the national system of innovation. Studying agro-industrial interactions in a setting of family farming, strong cooperative institutions and village-based small manufacturing workshops, Lundvall (1988) pointed to the importance of learning through user/producer-interaction, suggesting this as a main factor in the explanation of Denmark's superior performance as an exporter of dairy machinery

(a backward linkage from the production of dairy products). User/producer interaction can be considered formal grounded theory, while the explanation of Denmark's peculiar specialization is a substantive grounded theory.

Contrasting Uruguay and Denmark, Senghaas notes that the two countries did not have "dissimilar" points of departure: they were small, had small populations, and their modern development started in the early 19th century, based on agrarian staple exports, as they both lacked other natural resources. About 160 years later, Denmark was one of the world's richest countries, while Uruguay displayed all the defects of peripheral capitalism. Senghaas denies that Uruguay was kind of a "Latin-American Switzerland" in the mid-19th century. Rather, he holds that already at that time, Uruguay's "social deep structure" was decisively different from Denmark's. Uruguay's pattern was a "Latin American" one, with very large farms, indicating a highly skewed distribution of land. Danish land and income, in contrast, were much more evenly distributed. "*These different degrees of inequality implied different development potentials of the domestic market in question.* In Uruguay a highly unequal structure resulted in import–export activities on the pattern of the classical division of labour between metropoles and peripheries" (Senghaas, 1982, p. 174 and p. 119). This is a specification of the peripheral model as one out of two deep structures of development.

The connection between industry and agriculture was entirely different in the two countries. In Denmark, dense microcircuits linked manufacturing industry to agriculture. In Uruguay, "stock farming, which started with extensive production methods, remained basically extensive over decades and did not on the whole lead to any diversification of agriculture, was bound to prevent the emergence of an agriculture-based industry of Danish quality and density" (Senghaas, 1982, p. 169f and p. 113, cf. type 3 in Table 7 below).

The distribution of land holdings plays a crucial role here. If, writes Senghaas, in an exercise of counterfactual reasoning, "big estates had retained a larger presence and greater political influence, agricultural development on the pattern prevailing east of the Elbe [i.e. feudal patterns; L.M.] would have been more likely than an agricultural system based on family-operated farms and an economically independent peasantry" (Senghaas, 1982, p. 175f and p. 121). Senghaas enjoys playing around with such "alternative scenarios": If Finland had developed a Latin-American type agrarian oligarchy, he writes, these social forces would have had no interest in supporting a domestic import substitution industry. The consumption needs of such a small elite could easily be satisfied by imports (Senghaas,

1982, p. 121 and p. 77). Finland could have become like Romania (Menzel & Senghaas, 1986, p. 42; Senghaas, 1988, p. 21f). He also imagines a Balcan-Romanian fate for Sweden, possibly a Greek fate for Norway (Senghaas, 1982, p. 139f and p. 92), or Australia becoming something like Argentina. Conversely, he imagines that Portugal could have been Belgium or Switzerland (Menzel & Senghaas, 1986, p. 42; Senghaas, 1988, p. 21f). Senghaas also gives brief discussions, based on a very limited selection of sources, of two other autocentred cases (New Zealand and the Netherlands), and of one additional peripheral case (Ireland). He also presents the development of the Cuban economy since 1963 as a case of autocentred development "in spite of an initial dependence on agricultural exports" (Senghaas, 1982, p. 194). He then turns from small export-economies to somewhat larger ones, analysing briefly a variety of peripheral cases: Hungary, Romania, Thailand, Spain, the southern states of the U.S. and Argentina. The latter is compared to Australia, which is counted as an autocentred case.

Based on the factors identified, one can also pursue systematic process tracing: One such dynamic process is given special attention by both researchers. Although the structure of agrarian ownership was comparatively egalitarian, there was still poverty connected to the mid-19th century population explosion in rural areas. Thus, all of the Nordic countries recorded high emigration (Mjøset, 1992b, Table 4.5). Senghaas/Menzel refer to the Lewis (1954) type dual economy model in order to illuminate the effects of turning from a situation with unlimited supplies of labour to one marked by increasing scarcity of labour (largely due to emigration). Such factor shortage, however, was met by innovative response, a turn from extensive to intensive use of resources (Menzel, 1988, pp. 556–560, for examples). To the extent there were other kinds of factor shortages (soil, energy, raw materials, infrastructure, capital), there were similar responses.

Let us now turn to the political-institutional factors (cf. Table 5 below): First, there was successful defeudalization and deoligarchization of the agrarian societies. Second, given modernization based on export-industries interacting with smaller manufacturing firms supplying an evolving domestic market, there was early social and political mobilization protecting the interests of the working masses. This sustained and increased mass demand, which consolidated the domestic market. Third, there were measures to increase the general level of education, since efforts to hook on to internationally evolving technologies and product-innovation required permanent adjustment and upgrading of acquired competences. Fourth, these political systems allowed free speech, mobilization, institutionalized conflict solution (Menzel, 1988, p. 579).

Table 5. Socio-Political Mobilization Factors Explaining Autocentred Development.

Area	Factors	Nature of Factors Conducive to Autocentred Development
Social (defeudalization)	• Mobilisation of farmers	• Strong cooperative movement
	• Mobilisation of workers	• Strong union movement
Political (deoligarchization)	• Democratization (agrarian reform, abolition of special privileges)	• Effective democratization weakens old elites and leaves more room for "industrial" interest groups and the establishment of "conflict solution systems" in which these groups have a say (corporatism)
	• Nation building and sovereignty	• Early national sovereignty allows national self-determination in customs policies, control of resources, use of earlier unsettled areas. Events in smaller countries often corresponded to the revolutionary events in the larger countries (1789, 1848, 1917, etc.)
	• Nature of party system	• Only moderate degrees of clientelism. A parliamentary-political constellation that counterbalances the alliance between dominant export-interests and external interests involved in trade and investment with the country
State apparatus	• Administrative reform	• The bureaucracy must adjust to democratization and new social movements
		• Unified legal system and legal security (securing personal rights/freedoms)
	• State provision of infrastructure	• Maintain demand e.g. for high-tech products, facilitate the emergence of industrial centres and interaction between agriculture and industry. Match intervention and competition (cf. economic institutions Table 4).
	• State provision of education	(see Table 4)

Source: Senghaas (1982, p. 136f and p. 90f) and Menzel (1988, p. 565). Modified and extended.

Menzel (1988, p. 552) summarizes the common factors found in his four cases as follows: Responding to peripherization pressure, each country showed a "unique mix of technology transfer and indigenous invention or adjustment". Their trade policies involved "very careful and very selective" delinking. All countries avoided direct competition, seeking specialized niches, that is, hiding behind barriers based on specific skills and competences. Trade liberalization and state intervention were balanced: liberalization hit remaining feudal privileges, and state intervention was responsible for the fact that in "all cases a more homogenous distribution of land was either preserved or initiated". This trend would continue in the 1930s, with early welfare state measures, and early efforts at employment policies.

As for these political-institutional factors, peripheral cases were only introduced in quite unsystematic ways. Senghaas' contrasting of Denmark and Uruguay briefly mentioned various institutions and countermechanisms such as clientilism, corruption and low trust in government/state, features which could be seen as interacting with the inegalitarian distributions of land and income to barr autocentred development.

It is impossible here to summarize the full extent of factors and conjunctures analysed by Senghaas/Menzel, but the main factors can be synthesized in two tables (Tables 4 and 5), which can be seen to constitute a new "memo" – a "mid-project" report.

THIRD MEMO – LISTS OF EXPLANATORY FACTORS

Grounded theory can be regarded as a subspecies of a more general approach to systematic knowledge in the social sciences: explanation-based theory (Mjøset, 2005). We have just seen how Senghaas/Menzel tried their best to explain the fact that the success cases sampled during their second round achieved autocentred development without cutting entirely off from the world economy.

The several papers in which Senghaas/Menzel reflected on these results can be treated as a new memo, which consists of lists of the explanatory factors they have discovered. Thinking about these factors, it is relevant to *sort* them in some way. In Tables 4 and 5 we have systematically listed the factors generalized by Senghaas (1982) from the study of the critical phases of types II and III cases. Table 4 contains socio-economic factors and Table 5 the political-institutional factors. These factors form "the basic background and environmental conditions" behind the development scenarios that can be observed historically. Further sorting is also possible: the socio-economic

factors of Table 4 is grouped in three dimensions (agrarian property, distributional patterns, economic institutions) and the political-institutional factors of Table 5 are similarly clustered into social and political mobilization as well as state institutions/policies.

Senghaas/Menzel do not establish these lists themselves, but a similar sorting of factors play a major role as they work further on their project. Such sorting of explanatory factors provide checklists that guide the study of further cases, they inspire further discussion about which institutions, movements and policy areas that are important. They invite investigation of mechanisms understood as formal grounded theory relating to various social spheres and interaction across several spheres. Working on these diverse explanatory factors, the researchers stumble upon earlier grounded (''middle range'') theories that prove important in certain respects, witness the importance of Lewis' dual economy model and Hirschman's theory of economic linkages. The latter cuts across the dependency versus modernization theory polarization, which turns out to be a quarrel between high level theories that are not sufficiently grounded. With reference to Tables 4 and 5, one can specify how the various factors have ''a configurative effect on each other'', that is, they interact in processes of ''circular and cumulative causation'' (Menzel & Senghaas, 1986, p. 29f; Senghaas, 1988, p. 11 refer to Gunnar Myrdal's notion, for a more recent statement, see Ragin (1986) on ''multiple conjunctural causation'').

This leads on to a discussion of the relation between mechanisms and processes of cumulative causation. While mechanisms may be stated in entirely formal terms (Hirschman's idea about linkages may be formulated as a network approach to industrial structure), social processes are semi-specific: historically, all the Nordic countries display cumulative processes that link e.g. their relatively egalitarian resource/income-distributions, their cooperative movements, and their systems of education and skill-creation. A higher level of literacy interacted with an increasing quality of higher education. This led to greater capacity to survey and disseminate knowledge, and this – among other things – influenced developments in the agrarian sector: the cooperative movement could provide information to farmers on new knowledge (technological and business cycle trends). Through other channels, such knowledge flowed to industry too.

In methodological terms, unsorted lists of factors are relatively inductive, but they are collected not by chance, they reflect specified research problems. Sorting the lists and combining the explanatory factors, the researchers arrive at mechanisms and social processes. Thus, these are grounded, but they are also the result of analytic procedures, explicit concept formation

and considerations about relations between concepts. They are not the result of *ungrounded* analytic thinking, they are not, for instance, based on game-theoretical modelling or on some philosophy of history account of modernity.

Furthermore, by studying cases where the factors listed are absent, Senghaas/Menzel can use the list to decide which of Amin's mechanisms that should be retained. Thus, the study of successful developments also benefits the study of underdevelopment.

The specifications achieved by working on the basis of these lists make the quest for driving forces more complicated. As more cases are discussed, statements on what the deep structures are tend to multiply. A deep structure can be seen as a national or regional legacy. Such legacies may be conceived as conjunctures of several of the factors listed in Tables 4 and 5. In that case, it becomes hard to analyse a transition from peripheral to autocentred development. Analysing such conjunctures, we cannot see theory as "representation" of fundamental forces that drive a country out of structural heterogeneity and into structural homogeneity. But we can see entities as real: real actors (collective and others) that are learning and making decisions. We turn from Hacking's (1983) "realism of theories" to his "realism of entities".

The division between what is deep and what is "surface" tends to diminish. The researchers are drawn in an empirical direction. They trace processes of cumulative causation and realise that these are embedded in specific contexts. Given the importance of the territorial nation-state through the historical period analysed, the context is above all a national one, but even specific world-historical periods (such as the inter-war period) are relevant as context. Thus, the comparative analysis of distinct cases – grounded theory – emerges as an alternative to generalized driving forces or deep structures. We return to this at the end of this essay.

THIRD ROUND OF THEORETICAL SAMPLING – EARLIER AND NEW SOCIALIST CASES

With their stratified lists of explanatory factors based on theoretically sampled cases, Senghaas/Menzel had a rudimentary grounded theory. Still, it relied on a limited number of cases. Their next stop was to develop the theory through the explanation of further cases. Senghaas/Menzel both pursued theoretical sampling of further cases and reanalysis of earlier cases. The latter was relevant since the theory had been changed.

In the reanalysis, the lists of explanatory factors were projected back on to the socialist countries that had delinked from the world economy. In a 1980 essay (reprinted as Senghaas, 1982, Ch. 6), Senghaas reanalysed these developing countries together with the more developed socialist states of postwar Europe's eastern bloc. For none of these cases he could assume (as one might have done with reference to Amin's theory) that since they were in the "right" structural position economically, the internal conditions made no difference to their development. Senghaas turned to an alternative idea that also rooted in the dependency tradition: Immanuel Wallerstein's (1979, p. 74) claim that socialism does not transcend capitalism, it is rather a strategy for catching up with the capitalist core.

Senghaas claims that in a first phase, all small socialist countries could record successes. But these early successes created a politically based "disproportionality", which eventually gave rise to structural economic problems. The monopoly of power tended to isolate the ruling elites, who ran a top-heavy planning bureaucracy, increasingly incapable of both learning from experience and of critically evaluating policies. This led to misplaced investments and problems of coordinating the industrial sectors of these planned economies. Thus, when the demand for increased supply of agricultural and industrial consumer goods picked up, even the most industrialized countries were incapable of responding in a satisfactory way. The development of a domestic market, that is, the transition from extensive to intensive economic development, was blocked.

Senghaas considers that this may be a similarity between socialist and state capitalist latecomers that attempt to catch up. In particular, he claimed that these problems of autocratic rule might shed light on the ongoing political conflicts (late 1970s) in South Korea and Taiwan (Senghaas & Menzel, 1981, p. 38). An authoritarian political framework can only be reproduced in the long term with counter-productive social and economic consequences. The development of productive forces creates highly complex socio-economic structures. It becomes imperative to transform the political and administrative system into one that has "socio-cybernetic potential" for self-management. Attempts to manage such complex structures within an autocratic framework create political problems that easily feed back to the economic structure, decreasing the productivity of capital. Increasing complexity must be matched by a more flexible political framework than what the command approach can supply. The paradox is that while autocratic rule seems necessary at the outset, in the longer run it creates political inertia. Such a situation may lead to complicated social conflicts that may stall the virtuous circles of autocentred development.

In methodological terms, we can see how the history of factors that explain the Nordic countries is projected on other cases. The researchers here encounter cases of political-institutional barriers to further development along an autocentred path. To explain this, they discover mechanisms and these are combined into cumulative processes that differ from those analysed in the Nordic cases. They select certain middle range theories, quite formal theories, but still judged to be grounded enough to serve as the best analytical framework when combining the new mechanisms into new cumulative processes. In these cases of political barriers to further autocentred development, Senghaas/Menzel find that theoretical elements from earlier modernization theory, notably Deutsch' socio-cybernetic theory, have best analysed such features (Senghaas & Menzel, 1981, p. 38; Deutsch, 1961, 1966, 1977). This theory, by the way, is similar to linkage theory in that it thinks very much in terms of networks and transactions.

These political problems of further autocentred developments were most pronounced in the most industrialized, ''advanced socialist countries'' (such as GDR, CSSR). The combination of command economies and political autocracy barred the further transformation towards consumer-oriented, intensive economic development. The population became apathetic, as most people retreated to privacy. Here is actually an exception from the rule that social scientists are seldom good at predicting: Ten years before the peaceful Eastern European revolutions of 1989, Senghaas (1982, p. 299 and p. 198) wrote that ''new social conflicts threaten to arise as a consequence of growing social inequality'': ''If reforms are not carried out, the efficiency trend of the economy further declines. If they are carried out, new and hitherto unusual forms of open conflict settlement are necessary, which conflict with the present political-institutional character of socialist societies. Here lies the acute structural dilemma of present socialist societies''. Paradoxically, what was needed in these ''worker/farmer-states'', was a ''political catching up'' process which would make the labour movement independent (Senghaas, 1982, p. 319). A class compromise should develop, with open, institutionalized conflict settlement (Senghaas, 1982, p. 299f and p. 198). Regional cooperation in the Eastern bloc (Comecon) could not compensate for these internal deficiencies.

Socialism was most efficient in the socialist developing countries where it helped overcome structures established either by peripheral capitalism or by underdevelopment. But Senghaas was now convinced that results from the study of these countries could not be generalized to other socialist countries. Even worse, the analysis of the other socialist countries indicated political problems that seemed likely to occur if socio-economic progress was not

matched by some sort of democratization. This indicated development problems for any country in which authoritarian rule was maintained its critical period.

This also specifies the analysis of the European (and more broadly the OECD) cases: parallel to the establishment of "closed national economies", they developed specific political institutions and particular cultural identities. This increases the importance of these cases as models even for political development. The eastern European and other socialist countries were (now) redefined as changes which embarked on an autocentred track from which they later departed. Senghaas here anticipated later research on topics such as democracy and development, and "democratic peace".

The group of autocentred cases was narrowed down, the variety of non-autocentred cases increased. Thus, it made less sense to claim that peripheral development is marked by one deep structure. The roots of success and failure may be at the socio-economic or the political-institutional level. If the autocratic political institutions remain unaltered, quite egalitarian distributions of land and income may be tied up in a constellation that establish barriers to development. Once again, it turns out that when the focus turned to internal factors, it was harder to maintain the idea of fundamental driving forces. The sampling of the socialist countries thus sustained the move towards conjunctures rather than deep structures.

FOURTH ROUND OF THEORETICAL SAMPLING – CONTEMPORARY SUCCESSFUL DEVELOPERS, THE NIC-COUNTRIES

Through the discussion of 19th century success cases and 20th century socialist problem cases, the theory of autocentred development was further integrated. The success cases, however, were historical ones, their critical periods were in the 19th century, and the contemporary socialist cases differed from the non-socialist ones both in terms of internal organization and international integration. Obviously, it was now crucial to sample other contemporary cases, especially cases marked by association to the capitalist world economy.

Just at the time Senghaas/Menzel worked on this, certain new experiences captured the attention of development researchers: the East Asian "Newly Industrialized Countries" (NICs) emerged in the late 1970s as second generation Japanese style "miracle economies". Between 1981 and 1984, Senghaas/Menzel conducted a project on East Asia's so-called

"threshold-countries": South Korea and Taiwan, the two most important NICs.

We have seen that in the first phase of the project, Senghaas had held that South Korea shared all the traits of the peripheral mode. In his early 1980s programmatic essay (1982, Ch. 5) on the East Asian miracle countries, he found it hard to decide whether South Korea was about to make a transition to autocentred development, or whether it was still marked by some of the same difficulties as other countries of the capitalist periphery (Senghaas, 1982, p. 261 and p. 170). He now emphasized, however, that both income distribution and the distribution of holdings were more egalitarian than in most other third world countries (Senghaas, 1982, p. 262 and p. 171f). Only Taiwan had a better score. He found, however, that there had been no deepening of the domestic market, a fact which corresponded to an abnormally (given its medium large population) high export share (34 percent in 1978). Inspired by the studies of Nordic developments, he speculated whether South Korea would experience a situation of labour scarcity, as its economy got thoroughly capitalized, and whether such a squeeze would lead the country on to a more dynamic development path (cf. the Lewis model). But alternatively, he entertained the idea – just sketched above – that if South Korea failed to turn from extensive (peripherization) to intensive accumulation (autocentred development), with a continuous increase in productivity, it would encounter problems similar to those of socialist developing countries, e.g. its socialist twin, North Korea (Senghaas, 1982, p. 266 and p. 175). Senghaas employed the results of earlier research in the analysis of the cases that he most recently sampled.

Following Menzel's (1985) monograph on the cases of South Korea and Taiwan, these hunches were further modified. The two countries were now largely presented as success cases. The list of factors derived earlier was used as a checklist. Again, the deep structure/conjunctures schism appeared. Senghaas/Menzel rejected the claim that any one factor explains Taiwan's and South Korea's success. At the same time they argue that all the factors here mentioned must "be seen in the light of the relatively homogeneous baseline profile that is typical of the East Asian development paths" (Menzel & Senghaas, 1986, p. 57; Senghaas, 1988, p. 35). They are still tempted by the idea that egalitarian distributions of property and income play a fundamental role, but in the end, the explanation is in terms of a more complex virtuous circle in which these factors reinforce each other. We provide just a brief summary of their analysis:

The first set of factors (cf. Table 4) is the socio-economic ones: agrarian property and income distribution. In fact, there were postwar land-reforms

in both countries, spurred by the U.S., which – given the two countries' location on the Cold War perimeter – provided generous aid (Menzel & Senghaas, 1986, p. 157) to both. This was a policy strikingly different from the U.S. policy towards its own "backyard", Latin America. It should be noted that in this conjuncture, there is a link between the distribution of agrarian property and a system which is international and connected to Amin's capitalist world economy, but not identical to it: the Cold War geopolitical structure, the system that Senghaas had originally studied as a peace researcher. This system of international relations was linked to the international economy above all through the exercise of U.S. hegemony.

Senghaas/Menzel also mention a number of factors that relate to how the national system of production responds to international competition by upgrading and innovation. Firms are marked by a systematic export-orientation. They also discuss the possibility that there are certain cultural traits typical of the East-Asian region (an eagerness to learn), traits that may be reinforced by state policies in the field of education and research. A high level of educational achievement is typical of these countries. Also other social structural factors (possibly interacting with egalitarian distributions) are taken into account: high social mobility and a peculiar work ethic.

Further factors relate to "state capitalist" features. One is the long-run absence of direct investments by foreign firms, since ownership was largely restricted to nationally based business elites. Another is the existence of a strong and skilful state bureaucracy, capable of leading industrialization, organizing capital imports and balancing associative and dissociative features of trade policies (Menzel & Senghaas, 1986, pp. 157–159, 170). The latter feature is the best example of a strong state class (cf. Type 5 of Table 7 below).

Senghaas/Menzel also add a new set of factors relating to regional peculiarities. Amin's original analysis of peripheral development was related to his views on the transition from classical to new colonialism. But Senghaas/Menzel found that in the East-Asian region, important colonialist influences did not create peripheral patterns. Although Japanese rule was ruthless and despotic, the Japanese – when they withdrew – left behind them an industrial tradition, a tradition of state capitalist organization, as well as a food producing sector which was a potential basis for autonomous development (Menzel & Senghaas, 1986, p. 34; Senghaas, 1988, p. 15). In the postwar period, Japan's dominance was replaced by U.S. hegemony via the Japanese-American alliance in the Far East, as already noted.

As for methodological lessons, we recognize that this insight into regional geopolitics can again be projected back to other cases in the U.S. sphere on

influence! By introducing the nature of hegemonic or great power influence into the analytical framework, the theory is adjusted. Japanese influence was different both from Western influence and from Moscow's dominance in the socialist world. The East-Asian NICs pushed eagerly to catch up not generally, but with Japan specifically.

Similarly, the later U.S. influence was important. It is likely that in other parts of the world, there were countries with just as good conditions for autocentred development as South Korea and Taiwan, but since they were not on the defence perimeter of the "free world", the U.S. had no geopolitical interest in supporting them. On the other hand, there were surely other countries that the U.S. did influence for geopolitical reasons, but which for internal reasons had no chances whatsoever of achieving autocentred development. These lessons from the study of a non-European region made Senghaas/Menzel include regional specificities in addition to national legacies.

We have seen that Senghaas, writing in the early 1980s, was still careful to give a balanced judgement. The factors emphasized in his reanalysis of the socialist cases – the lack of democratic participation, neglect of human rights, and denial of freedom of speech and organization – were also present in Taiwan or South Korea. Senghaas now seems to deemphasize them. In defence, one might argue that the political phenomenon of autocratic rule in these cases are part of a conjuncture of factors which as a totality gives a result different from that observed in the socialist developing countries. Senghaas/Menzel claimed that these strains in the medium term will prove dysfunctional, being eliminated through mass protest. Having brushed up their historical memory, they remind the reader that industrialization preceded democratization in most European countries (Menzel & Senghaas, 1986, p. 155f).

As for the fate of planned economics and autocratic third world states, there is much to say with reference to the 20 years that have passed since Senghaas/Menzel studies were published. The socialist countries (except North-Korea and Cuba) are now history: but transition to new political structures has not only led to virtuous circles in former Eastern Europe. East Asia was hit by financial destabilization in the late 1990s, and above all China has entered its "capitalist transition", doing much better than Russia, despite the continued existence of a one-party state. There is, however, no space here for an updated analysis. Scholars who would try to stand on Senghaas/Menzel's shoulders could still use the list of factors, which is useful even if the conjunctures are novel. If, furthermore, the new cases refer to a new period, one must use periodization as "chronological" typologies.

Presently, the enormous weight of China as the new ''workshop of the world'' makes for a wholly new international context.

INTEGRATING THE THEORY – GENERALIZATION AND OPERATIONALIZATION

In the closing phase of the project, there was no further sampling of cases. It is not hard to think about a number of cases – particularly cases of peripheral development – that could have been sampled or resampled in order to further develop the theory (Mjøset, 1992a, p. 144 on Germany and p. 145 on Ireland). However, Senghaas/Menzel had already sampled more cases than usual in projects based on qualitative comparison. In the final stage of the project, they went further towards a typological mapping of the conjunctures they had analysed. In addition, they developed a list of quantitative indicators of the degree to which an economy was approaching autocentred development.

Just as Marx analysed capitalism's basic structure through a two-class model, Amin's dualism between autocentred and peripheral development was based exclusively on an analysis of the capitalist *mode of production*. Finding that internal factors play important roles, Senghaas/Menzel turned from the mode of production to what in Marx' materialist conception of history is called the social formation.

In their concluding typological considerations, they were concerned to move beyond the lists of factors. As we have noted (see also Table 1), their ideas about deep structures had become increasingly thin, but there was still some ambivalence, as they seem now to go for a compromise between driving forces (deep structures) and conjunctures. They refer less and less to just two deep structures, instead, they work on a typology which maps a larger number of basic conjunctures of driving forces, specified as structural constellations between the main collective actors in a social formation.

In the terminology of grounded theory, they search for a typology that can form their substantive grounded theory: a relatively limited number of conjunctures of factors that during ''critical periods'' established a bias towards autocentred or peripheral development. The typology would represent the ''patterned variety'' of ''points of departure'' for development. Based on such a substantive theory, they also, as we shall see, continue to develop formal grounded theory.

A first overall typology (Table 6; already presented in an earlier phase of the project: Senghaas, 1982, p. 66ff and p. 46ff) sketches six different

Table 6. A Typological Sketch of Agrarian Preconditions for Industrialization.

Agriculture	Industrialization	Dynamics	Cases
Subsistence	Hardly any	If there is industrialization with continued subsistence, then all typical symptoms of peripheral development emerge	Balcan, large parts of the third world
High productivity agriculture	Particularly dynamic	Easy modernization	US, Canada, Australia, New Zealand
Early and forced agricultural modernization	Early and forced industrialization	Dramatic social disturbances	England
Slow and continuous agricultural modernization	Slow and continuous industrialization	No take-off phase	E.g. France
Evolution of autonomous family farms	Broadly spread, and stepwise	Smooth emergence of autocentred development	Denmark
Not broadly effective (in large territorial states)	Not broadly effective (in large territorial states)	Development does not affect the whole territory: but in certain regions an autocentred agro-industrial core developed	Spain (Basque counties), Italy (north)
Forced extensive growth of the agricultural sector. Peasant population forced to produce more with no further productive investments	No industrializing impulses arise, the majority of the population is stuck in a situation of pauperism	Elements of industrialization remain isolated within the economy	Portugal, Spain, Romania, Greece, large parts of the third world

Source: Stylized from Senghaas (1982, p. 66f and p. 44f), Menzel and Senghaas (1986, p. 43f), and Senghaas (1988, p. 22f).

historical connections between agricultural dynamics and industrialization (Menzel & Senghaas, 1986, p. 43f; Senghaas, 1988, p. 22f). The discussion of these factors in the summary essay is quite brief. Rather than a proper typology, this is a sketch summarizing material from economic history monographs on the relationship between agrarian structure and industrialization. Some of the types are overlapping, and one important type (the Latin American case of huge agricultural estates) is missing (it fits neither the first nor the last type).

But further elements must be included: industry implies two classes, and while the state is surely an arena for struggles between social groups, but also has some autonomy of action. The typology in Table 7 goes some way towards inclusion of such factors. It approaches directly the problem of social and political prerequisites for development, distinguishing five ''basic socio-political constellations''. Class relations are studied as results of distinct national conjunctions at the level of territorial states. Success hinges on the outcome of the political conflict between ''new'' and ''old'' groups: if, for instance, the various measures of distributional inequalities show high values, the chances are high that ''traditional oligarchic export interests'' (Menzel & Senghaas, 1986, p. 29; Senghaas, 1988, p. 10f) will triumph. Further developments of this typology would lead to a typology that classifies nation-states with real names, with reference to class-distinctions, as well as to the role of the state. This typology is substantive grounded theory: it organizes knowledge from comparative case studies of historical development patterns.

Types 1–2 produce virtuous circles of autocentred development, types 3–4 produce vicious circles of peripheral development. Type 5 yields different outcomes, but the cases analysed by Senghaas/Menzel are predominantly cases of development into an autocentred situation.

Senghaas/Menzel also clarify more formal aspects of virtuous or vicious circles for the cases of autocentred and peripheral development, respecified with a stronger emphasis on internal factors than what Amin would have allowed.

The specified sketches of the interrelationships between the solutions of social conflicts and the economic development potential of a country are summarized in Figs. 4 and 5. Each box refers to many mechanisms, while cumulative processes run in various circular ways between the boxes. Tracing the specified circles would be systematic process analysis.

The patterns portrayed in these figures are formal: They may be applied to states or regions (indicated in some of the patterns in Table 6) or even to smaller economic units. They will only aid our *explanations*, however, if they

Table 7. Socio-Structural Baseline Conditions.

Type	Decisive Collective Actors				Social Compromise Resulting from the Formative Conflict
	Farmers	Bourgeoisie	Workers	State Bureaucracy	
1. No feudal past	Free-hold farmers	Productive small business sector, growing to industrial bourgeoisie	Wage earners gain strength early	Pursues a coherent development strategy: infrastructure construction, selective protectionism	Autocentered virtuous circle. *Examples*: The four settler colonies: Canada, the U.S., Australia, New Zealand
2. Successful defeudalization	Similar structure as Type 1, but as a result of often long and painful processes of social change depending on the balance of power between rulers, aristocracy, merchant capital, bourgeoisie, working class				Autocentred virtuous circle. *Examples*: Western Europe, particularly smooth in Scandinavia
3. Dominant agrarian oligarchy and merchant capital	Agrarian oligarchy	Strong merchant capital fraction, a subordinate industrial bourgeoisie	Underemployment: increasingly in urban slums	"Self-colonisation": bureaucracy tried to agrarian elites and merchant capital, often with military support	Vicious circle of peripheral export economies. *Examples*: Latin America, peripheral Europe

4. Colonial situation	Settler farmers Native labour	Trade in staples/ luxuries	Underemployment, predominantly in agrarian slums	Local elites retaining – after independence – privileges gained in collaboration with colonial rulers	Vicious circle of peripheral export economies, perhaps even more monocultural enclave economies than Type 3. *Examples*: Many third world countries
5. State class	Agrarian reform of some sort (Japan)	Infant industries nourishing its own bourgeoisie	Labour excluded or cooperated	State class may succeed in dominating traditional forces, embarking on an offensive development strategy	Different outcomes in individual countries. *Examples* of successes: The East-Asian NICs

Source: Developed from the verbal presentation in Menzel and Senghaas (1986, pp. 49–51) and Senghaas (1988, pp. 27–30).

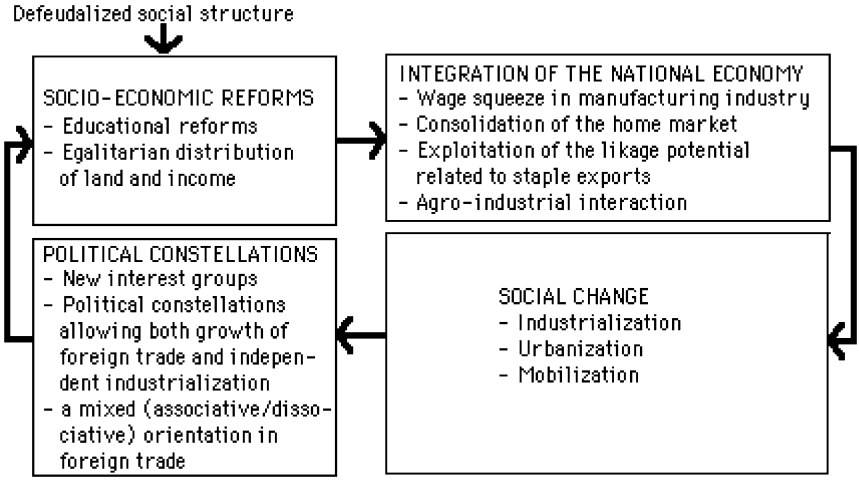

Fig. 4. The Virtuous Autocentred Circle.

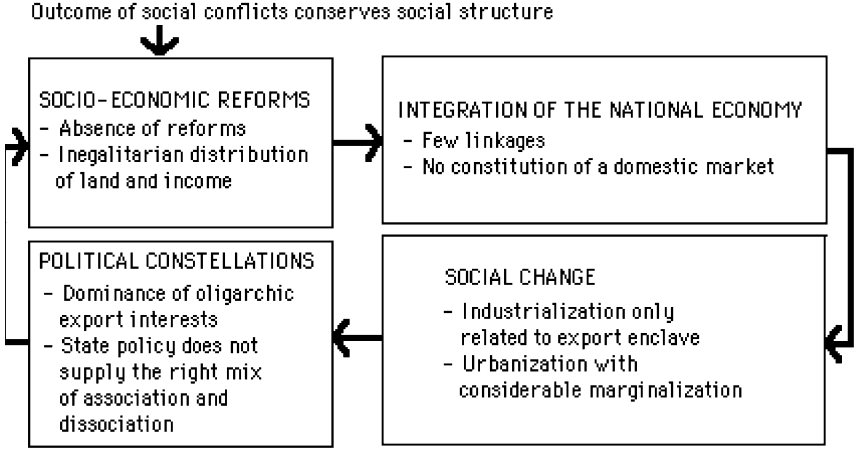

Fig. 5. The Vicious Peripheral Circle.

are linked to substantive knowledge in the form of typologies and periodizations. The typological sketch in Table 7 is specifically related to territorial states. If our research questions related to regions, we would need to use other typologies and the mix between formal and substantive theory would be different. One step towards such an integration of formal and substantive

theory related to varieties of capitalist territorial states would be the specification of virtuous and vicious circles for each of the five types in Table 7.

Such specifications would be compatible with the collection of quantitative indicators (Table 8). Senghaas/Menzel conducts a benchmarking exercise, deriving indicators from Menzel's study of the NIC success cases. The indicators provide a battery of target values which a country should strive for if it wants to follow "in Europe's footsteps", which was Menzel's conclusion about the experience of these East-Asian NICs (Menzel & Senghaas, 1986, Ch. 5).

The threshold values are based on the indicator values observed for the relevant critical periods in the East-Asian and other NICs, as well as in certain OECD countries. The list covers economic measures only, but Senghaas/Menzel (1986, p. 179) states that they would appreciate an extension to social and cultural indicators. Such indicators should be linked closely to the further improvement of the Table 7 typology.

There is even here remnants of driving forces terminology: Indicators 1 (agro-industrial connections) and 2 (internal market), which contain the crucial distributional variables (land and income), are seen as conditions of the remaining ones: 3 (coherence), 4 (homogenization), 5 (maturity) and 6 (export-competitiveness). Indicators 1, 5 and 6 relate to the development of manufacturing industry, the supply side: 1 includes a measure of agro-industrial interconnections, 3 (coherence) measures the density of linkages within the national economy, 5 (maturity) measures how sophisticated manufacturing products the economy is able to put out, while 6 (export-competitiveness) measures the extent to which these same products conquer export markets. Indicator 2 relates to the demand side, the consolidation of a domestic market. Indicator 4 (homogeneity) concerns the balance between the sectoral distribution of employment and sectoral contributions to GNP. If the two distributions diverge strongly, structural *heterogeneity* is indicated: in such a case (as e.g. data for India brought out by the early 1980s), the decline in the agricultural sector's contribution to GNP is not matched by a parallel decline in its share of employment: this indicates a persistent gap between the productivity levels in industry and agriculture. In the homogenous case, equalization would be recorded.

But the driving forces suggestion is again modified by the statement that while these indicators may be analytically separated, what really matters is the cumulative process: "The determining factor is the combination of processes relevant to development strategy in a new profile that ultimately, structurally, quantitatively or qualitatively – has nothing in common with the original export economy" (Menzel & Senghaas, 1986, p. 42; Senghaas, 1988, p. 21).

Table 8. Structural Economic Indicators of Newly Industrializing Countries.

1. The structure and performance of the agricultural sector and the extent to which it is intermeshed with the industrial sector		
Performance (interacting with) distribution of land	Growth of agrarian production in the early phase of industrialization,	3 percent yearly average over 20 years
	Gini-index	<0.5
Agro-industrial connections	Agrarian input-coefficient (inputs of manufactured goods as a share of the value of agricultural gross production)	40% (0.4)
	Agrarian output-coefficient (the share of agrarian output serving as inputs to manufacturing, as a share of the value of agricultural gross production)	40% (0.4)
2. Broad-spectrum development of the internal market		
Growth of demand (interacting with) Dispersion of demand	A combination of: Growth of GNP per capita in the early phase of industrialization, and Gini-index for the distribution of incomes	4 percent yearly average over 20 years $<0,5$
3. Coherence		
Interpenetration within and between economic sectors	Total inputs as a share of gross production value or	45%
	Domestic inputs as a share of gross production value	35%

4. Homogenization		
A correspondence between (i) the distribution of the sectoral contributions to GNP and (ii) the sectoral distribution of employment (agriculture/industry/services)	The sum of percentage points of deviation between the two distributions, or A Gini-index of sectoral divergence (Ungleichheit)	Declining 20 0,2
5. Maturity		
A movement of production to capital- and skill-intensive activities	The share of machinebuilding, electrotechnical and automobile production within manufacturing industry	18%
6. International competitiveness		
Ability to compete in international markets	The share of machinebuilding, electrotechnical and automobile production in total exports. (Share of domestically produced capital goods.)	20%

Source: Menzel and Senghaas (1986, p. 197) (Table 8).

It is disappointing that Menzel and Senghaas never went on to actually figure out the indicators on the basis of existing data sources. One possible excuse might be that something similar had already been done by Morris and Adelman (1988) (see overview in Mjøset, 1992a, p. 151f), but possible divergences between these studies and Menzel/Senghaas' own indicators are not discussed. The battery of indicators is thus, as Menzel/Senghaas title says, "a proposal", one that has not really been exposed to the test of systematic empirical research.

PREMATURE GENERALIZATION?

At the end of their project, Senghaas/Menzel provide basic conclusions and lessons for development policy. The overall conclusion is that their findings can be generalized, they find "an astonishing degree of conformity between current observations on the development of East Asian countries and the historical findings regarding successful export economies" (Menzel & Senghaas, 1986, p. 40; Senghaas, 1988, p. 19). Their integrated theory of autocentred development, they hold, is confirmed by the large countries: "From a development-policy (and therefore a normative) standpoint, however, it is of considerable interest that the comparative analysis of large-population, large-area countries (U.S.A., Germany, France, Japan, Russia and the large Third World countries) confirm a central finding from the comparative analysis of export economies: the close correlation, from the outset, between the distribution structures at the basis of growth and the opportunities for truly effective development" (Menzel & Senghaas, 1986, p. 48; Senghaas, 1988, p. 26). They thus claim that "the conclusions reached in the comparative analysis of export economies can be applied on a general basis. Just as in export economies, success or failure in development depends on early and broad-ranging agrarian modernization and corresponding industrialization" (Menzel & Senghaas, 1986, p. 43; Senghaas, 1988, p. 22). Their typologies now pretend to classify the "development scenarios" of all countries of the world.

With such a grand conclusion, policy advice is easy: Contemporary developing countries should pursue agrarian modernization interacting with mass-consumption oriented industrialization. The basic condition for such a strategy is free farmers, the evolution of agro-industrial interconnections, constitution of a broad internal market, and suitable economic infrastructure (Menzel & Senghaas, 1986, p. 43f; Senghaas, 1988, p. 36).

It is understandable that, at the end of project work lasting for more than 10 years, the researchers are tempted to end up with unqualified

generalization and general policy advice. But once they do so, they fall back on the kind of deep structural interpretation that they increasingly questioned through their project work.

For instance, they write: ''So the initial distribution of resources and income is likely to be a major determinant in relation to development success. Studies on the connection between growth and distribution come naturally to the conclusion therefore, that the primary determinant for the development of income distribution is the social structure on which an economy is based. Thus today's Third World is repeating a basic historical process that occurred within and outside Europe'' (Menzel & Senghaas, 1986, p. 38; Senghaas, 1988, p. 17f; cf. also p. 48 and p. 27). This statement on one ''basic historical process'' amounts to what Hacking (1983) calls a ''realism of theories''.

Concluding in 1986, they still retain Senghaas' (1977) discussion of delinking: ''For societies with accentuated heterogeneous internal structures, some delinking and, in the extreme case, complete delinking from the world market is postulated as a condition for coherent development of productive capacity'' (Menzel & Senghaas, 1986, p. 62; Senghaas, 1988, p. 39). But they can no longer see this as a necessary and sufficient condition for development, since it is the absence of structural heterogeneity at the domestic level which produces autocentred trajectories, and this may go together with only quite partial delinking. Furthermore, the introduction of Eastern European cases into the comparison showed that the persistence of autocratic rule might destroy economic motivation and the potential for self-regulation.

But such a conclusion is not in tune with the long lines we have found in the Senghaas/Menzel-project: Early on, the researchers were aiming for a general formula. As the project developed, there was more attention to diversity, which emerged as the researchers included more dimensions. They turned from international asymmetries to layers of internal factors, specifying similarities and differences between cases along these dimensions. The more internal factors are emphasized, the more urgent the dilemma between deep structures and conjunctures.

Being out of tune with their most far-reaching typological result, the five basic conjunctures (Table 7), Senghaas/Menzel's unqualified generalizations are stated as if further typological differentiation was not necessary. In terms of grounded theory, however, the Table 7 typology should be seen as the main result of the project, since the integration of a grounded theory is always relative. While unqualified – and thus decontextualized – general conclusions halts the development of theory, grounded theory reports

conclusions in a way that urges future researchers to continue the generalization/specification dynamic.

Strictly speaking, Senghaas/Menzel's unqualified conclusion should make policy advice possible: at least any territorial state that has been through its "critical period" will be trapped in path dependent processes, determined by a primary "structural determinant". As a consequence, Senghaas/Menzel's theory ends up as *not* "practice oriented", since rather than conclusions on how to move from structural heterogeneity to structural homogeneity, it is a theory of how different states have already been trapped in one or the other path. The various case-analyses of development experiences just confirm that the point of departure was one that predisposed the case in question for autocentred or peripheral development.

In this connection, one should also think again about the notion of critical periods. It can easily lead to futile debates as to whether a case still remains in its critical period (during which policy advice may make a difference) or not. Again, it seems that further grounding is the only sensible solution: better work on periodization both of national and world-economic trajectories, since it is the interface between the two that defines critical periods.

Methodologically, unqualified generalization implies a decision against conjunctures. The notion of "a major determinant" legitimates explanatory priority seems to contradict the notion of cumulative causality. The *alternative* is obvious: if we take seriously Glaser and Strauss view of "theory as a process", we should close a project by offering our best account of the conjunctures we have studied. In such an account, typologies are bound to play a crucial role. In the case of Senghaas/Menzel, their best account is not their claim about deep structural processes, but their Table 7 typology. Conjunctions between factors – consisting of mechanisms and processes – drawn from all layers of the lists (Tables 4 and 5) would be something different. If we instead decide to think in terms of conjunctures only, we cannot make the deep-structural generalizations, we need to pursue the contextual generalization that emerge when we generate substantive grounded theory by means of typologies. This may not exclude claims about driving forces in specific cases during specific periods. This is a "nominalist" alternative, which chooses empirical sensitivity rather than "realism of theories". But it can also be linked to a realism of entities, since the driving forces depends on interaction networks, and within these, learning processes goes on, processes that may change the driving forces.

For the Senghaas/Menzel project this implies that there is no general (out of context) formula for the transition to heterogeneity to homogeneity. The fact that their Table 7 typology is unfinished and very much in need of

further differentiation just underlines the point that the local research frontier on development – as all others – is a collective venture.

CONCLUSIONS

In the field of macro-studies, it is important to recognize that substantive grounded theory is theory in and of itself, even if it is not taken further to formal theory! With territorial states as units, the collective of social researchers will – in principle – be able to encompass all cases as cases. There are now 191 members of the UN. To the extent that these are analysed as cases, substantive grounded theory must play a major role, and formal theory will be (relatively) less important.

Typologies are a crucial means if we want to simultaneously generalize and specify (cf. Mjøset, 2006). They enable us to accumulate the ''middle level'' knowledge that stems from grounded studies. But the role of typologies in substantive grounded theory has not been much discussed in the literature on grounded theory. Writing in 1967, Glaser/Strauss clearly considered grounded theory relevant for macro-studies too. But for a long time thereafter, most thinking about grounded theory was related exclusively to the micro level. Only since the 1980s debate on historical sociology has the relevance of grounded theory for macro-studies been reemphasized (Mjøset, 2000, 2006b).

Within certain well-developed research frontiers – such as that dealing with the welfare state – typological discussions have played a role in the accumulation of knowledge. But in development studies, there has been a lot of principal theoretical discussions and a large number of case-studies, but little of this work includes efforts to link further cases to earlier typological sketches. There have been no significant improvements of the Senghaas/Menzel typology since it was first developed in the mid-1980s. Their typological effort has been forgotten, despite the fact that one of the concluding books (Senghaas, 1982) and several papers (see full bibliography in Mjøset, 1992a, pp. 153–159) were published in English.

As for the literature on varieties of capitalism, it developed from studies of the political economy of the world's richest countries, the OECD members, with few, if any links to the development literature. It is thus not surprising that it has not paid attention to a typology that even students of development have forgotten. But Senghaas/Menzel's rudimentary typology (Table 7) is relevant for both development studies and varieties of capitalism.

The fact that this typology – or other parallel efforts – have not been further developed, may be linked to the belief that social science accumulates knowledge at the high level. As noted by way of introduction, from the point of view of grounded theory, such high level theory divides scholars, thus making accumulation of knowledge harder. Social scientists who are too busy accusing their opponents in the world of high theory of undermining the search for knowledge, may end up being incapable of making any real contributions to empirical knowledge at all.

Our substantive conclusion is therefore that both in development studies and in the related study of varieties of capitalism, there is need for more thorough work on the construction and revision of typologies.

How could studies of the varieties of capitalism use the Senghaas/Menzel-typology? It is important for the varieties of capitalism literature to trace the historical roots of their cases. Here types 1 and 2 (Table 7) introduce useful distinctions. The U.S. has its background as a settler colony, while Germany's experience was that of a state capitalist catching up process. In return, varieties of capitalism and related lines of study have better specified recent institutional transformations within the OECD-group. They are also more careful to specify the institutional specifications of the class-constellations indicated in Table 7. These institutional specifications lead to distinctions between national models within the five types of that table.

Furthermore, we also draw a main methodological conclusion regarding comparative macro-analysis: there is need for closer attention to the methodology of typology-making.

It is a striking observation that in social science, typologies have lasted, while grand theories have shifted. Exploration of the methods of typology-making also seems important to the extent we want to develop the links between the tradition of Weberian comparative-historical macro-sociology and the tradition of grounded theory. In postwar social science, perhaps only Rokkan (1999; Mjøset, 2000) can match the typological sophistication of Weber's *Economy and Society*. Specifying the importance of grounded theory methodology in the field of macro-studies, we should distinguish various types of typologies and various styles of typology-making. Furthermore, we should specify the relationship between typologies (as rich on contextual knowledge) to formal theory (mechanisms) and systematic process analysis.

At least for the field of comparative studies of territorial states, our programmatic conclusion is that researchers should not fear all cases! There are 191 states in the UN. Too much recent comparative research has consisted in attempts to test more or less general statements on often very small

samples. The knowledge generated cannot be considered strong and integrated. Why not study these states bottom up? Why struggle with a quasi-experimental method (or at least terminology), which tempts us to pretend that we are measuring the net effects of generalized causal "independent variables" – as if the macro-analysts could impose "treatments" (e.g. different kinds of institutional arrangements) on their macroscopic cases! Why bother with a style of analysis, which produces exceptions and outliers when we know that the case experts would shrug their shoulders at such treatment of cases they know well? Why not realise that all over the world, there are now research groups who are area- or case-experts, knowing about the processes playing themselves out in all cases of interest to a grounded study of varieties of capitalism.

If one wants to object that a comprehensive qualitative mapping of 191 contemporary states is out of question in practical terms, one must at least also think about why social science seems hampered by so many divisive forces! The dominance of high theory ideals seems to be one major reason. A focus on typological accumulation of knowledge on the "patterned variety" of contemporary capitalism would lead political economy away from a number of over-ambitious controversies on fundamentals and release collective capacity for growth of knowledge. Such an encyclopaedic venture would not at all be descriptive, it would be based on the generalization/specification simultaneity at work when the typological aspects of the programme of covering substantive grounded theory through constant comparison are taken seriously. A typology of the varieties of world capitalism would be an asset to researchers in many subfields of social science.

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CHINA'S CAPITALIST TRANSITION: THE MAKING OF A NEW VARIETY OF CAPITALISM

Christopher A. McNally

INTRODUCTION

There is little doubt that in terms of speed and scale, China's economic transformation is without parallel in the past. Never has the world seen a major economic power emerge in such a short time span and attain such a weight in the total world economy. Intriguingly, few social scientific analyses have explicitly interpreted the massive socio-economic changes taking place within China as associated with the emergence of a capitalist political economy.

Of course, many popular works targeting the business community have in a matter-of-fact manner accepted the capitalist nature of China's economic ascent (e.g., Woetzel, 2003). In the literature analyzing China's reforms the use of the term capitalism has also gained increasing currency, especially in the titles of books.[1] However, none of these works tie directly into the burgeoning literature that studies the institutional varieties of capitalism.[2] Failures to effectively integrate social scientific knowledge are naturally not new. Discussions and insights generated within one discipline generally tend to stay there, generating a set of sealed debates that resemble "a dialogue of the deaf" (Coates, 2005b, p. 3). Analyses of China's reform period have thus failed to explicitly treat China as an emergent type of capitalism from the

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vantage point of institutional political economy, especially its 'Varieties of Capitalism' (VoC) framework.

Accordingly, the purpose of this article is straightforward: I will map the institutional dimensions of China's emergent political economy by applying the capitalist lens. In other words, I will treat China as a new 'VoC.' The hope is that an explicit analysis of China as an emergent variety of capitalism can enrich the already existing literature on VoCs and, more generally, produce new insights on the workings of contemporary capitalism.

Conceptually, I come from what is termed the 'new institutionalism.' I understand institutions as "building-blocks of social order" (Streeck & Thelen, 2005, p. 9) formed historically by the continuous interaction between rule makers and rule takers. This historical interpretation of institutions sees them as "durable lock-ins or amalgamations of interests and social relations" (Swedberg, 2005, p. 6), a view which expresses the path dependency of institutional arrangements (Thelen, 1999). Put differently, institutions structure social relations and the dealings of social actors embedded in these, thus providing an ideal prism to study social dynamics. However, institutions are also continuously reshaped by the ideas and interests of social actors. An iterative view of institutional change along the lines of continuously recurring feedback loops is imperative for understanding the nature of social transformation.

Certainly, the growing international prominence of China's political economy and its massive influence on the capitalist world economy warrants an application of the insights generated by institutional political economy, especially the VoC framework. Yet, there are several difficulties when applying this framework to China's experiences, difficulties that need to be mentioned at the outset.

First and foremost, the VoC framework concentrates on the institutions of advanced industrial economies. In contrast, China constitutes a developing and transitional economy where institutional arrangements are in continuous flux. China's political economy thus differs considerably from those of established capitalist political economies, rendering a conclusive mapping and comparison of China's institutions with those analyzed in the VoC framework problematic. In a similar vein, China is a very large country that boasts a variety of locally embedded institutional arrangements. Indeed, despite being politically unified during much of its history, economic decentralization, globalization and widely differing regional endowments are interacting to create distinct local political economies. Again, a conclusive mapping of institutional arrangements is difficult, and an image of varieties of capitalism within China springs to mind.

Finally, the ruling Chinese Communist Party (CCP) holds that China's transitional economy is not developing into a capitalist system. The official mantra is one of a 'socialist market economy with Chinese characteristics' that obfuscates to a considerable degree how a capitalist transition – the processes associated with an emergent capitalist political economy – is unfolding. Although ideology complicates the conception of China as a new emerging form of capitalism, it forces the analyst to delve deeper into the nature and logic of capitalism per se. Can China at all be conceived of as a capitalist political economy, even one in the making?

Evaluating the People's Republic of China's (PRC) emergent political economy along the lines of the VoC literature is therefore somewhat tricky. However, China's seemingly odd fit with the VoC framework generates opportunities to enrich and expand on it. As recently argued by Jonas Pontusson (2005), the VoC literature forms an important fundament on which the comparative study of capitalist political economies can build. Pontusson (2005, p. 167) further notes that the VoC approach needs "to specify additional varieties of capitalism" that include, in particular, cases of developing economies. Conceptualizing the odd case of China as a variety of capitalism certainly fits this requirement.

The next section will delve deeper into the general nature and logic of capitalism by building on the work of Robert Heilbroner. In this manner, I will generate a working definition of capitalism that can serve as a benchmark for evaluating the progress of China's capitalist transition. I will then explore what I hold are the three most salient institutional features of China's emergent capitalism: state-led capitalist development; 'network capitalism;' and the absorption of China into the 'new global capitalism.' The final section will relate China's case to the VoC framework and suggest possible means for expanding on it. I will also elaborate on several future scenarios that China's capitalist transition is likely to face.

CAPITALISM AND CHINA

The first question that springs to mind when conceiving China as a capitalist political economy is whether it can be termed such. The CCP vehemently opposes the conception of China as capitalist and my own experiences have shown that relating the term capitalism to China can create all kinds of misunderstandings. One colleague even admonished me to just replace the term 'capitalism' with 'market economy,' therefore avoiding all discussion about whether China can be termed capitalist or not.

The problem therefore lies less with China's unique national circumstances. Rather, there is a general confusion about what constitutes a capitalist system. Definitions of capitalism remain influenced by ideology and generally fall along a spectrum from right to left. The right sees capitalism as a 'free' economic system based on market forces and private property rights. The left puts the 'social relations of production' front and center stage, arguing that capitalism is characterized by wage laborers who lose their own means of production, thus exposing them to the manipulations of capitalists and creating class struggles pitting labor against capital.

These definitions capture important aspects of capitalist political economies, but only provide part of the picture. Fortunately, in recent years several endeavors have attempted to shed the ideological baggage surrounding the term capitalism to arrive at an objective understanding of its properties (e.g., Nee & Swedberg, 2005; Coates, 2005a; Lippit, 2005). Capitalism is here perceived as the underlying socio-economic system shaping our era, which, not unlike feudalism, represents a generic mode of production, not an ideology.

Therefore, if we want to understand China's capitalist transition, we must go beyond mainstream definitions of capitalism to arrive at conceptions that are both fundamental and precise. Such conceptions must elucidate the common features of capitalism and the dynamics driving capitalist transitions, especially as applied to developing countries in which capitalism often ends up stillborn. For this purpose, I will introduce a conception of capitalism as put forward by the late Robert Heilbroner. Somewhat unfortunately, his two insightful books (1985, 1993) have not found a wide following among contemporary students of capitalism. Heilbroner's conception consists of three central elements defining capitalism, each of which is by nature dynamic and can thus be applied to assess the character and development of China's political economy.

The first element of capitalism emphasized by Heilbroner is the distinctive drive to extract and accumulate capital, which must become "the major organizing basis for sociopolitical life" (Heilbroner, 1985, p. 143). Capital is intrinsically dynamic, since it can change its form from commodity into money and then back again (cf. Marx's M-C-M'). This repetitive extraction and then reinvestment of capital unleashes new productive forces or as Heilbroner contends, "Capitalism is a system organized to search for, and to seize on, whatever technological and organizational changes offer profitable chances for expansion" (Heilbroner, 1993, pp. 134–135). This drive to seek new profit opportunities also lends capitalism its relentless pressure for change. Capitalism is therefore a system fostering social, economic and political progress.

In China, the process of reform and opening up unleashed by Deng Xiaoping in 1978 started a gradual but accelerating process of capital accumulation. In a sense, rural households acted as the catalysts in China's drive to accumulate capital since agricultural reforms triggered a rise in agricultural productivity, which allowed farmers to increase their savings.[3] Increased savings provided much needed funds to state financial institutions, allowing entrepreneurial local governments to invest in a manifold of government-guided ventures. In fact, this represents an extraordinary feature of China's developmental pattern. Local officials did not appropriate and squander newly accumulated capital in conspicuous consumption, but invested it in local industrial projects. This was mainly due to the fact that the economic performance of local economies became the principal yardstick for cadre evaluation under the Communist Party's *nomenklatura* system (Huang, 1996; Edin, 2003).

However, as these local ventures over-expanded and faced ruthless competition during the first half of the 1990s, their economic profitability declined. Local governments were confronted with fiscal crises and started to tinker with a range of reforms, most involving some form of partial or full privatization (Unger, 2002). Much capital accumulation therefore became concentrated in China's growing private sector. The higher productivity of Chinese private firms allowed them to overcome government discrimination and nudged China's political economy into a capitalist transition.

The second element of capitalism noted by Heilbroner concerns the structuring role of markets, which dominate the functioning of the economy. Unmistakably, capital can only flourish when it is continuously dissolved and recaptured, forced by competitive pressures to move from productive activities with lower returns to those with higher returns. The market system creates these competitive pressures via the price mechanism. Markets are also indispensable to channel factors of production, such as land and labor. Therefore, markets constitute the necessary organizing principle of capitalism, but

> capitalism is a much larger and more complex entity than the market system we use as its equivalent …. The market system is the principal means of binding and coordinating the whole, but markets are not the source of capitalism's energies nor of its distinctive bifurcation of authority (Heilbroner, 1993, p. 96).

The emergence of a market economy and its attendant social manifestations has been the most widely noted aspect of China's transition. Barry Naughton (1995) has analyzed succinctly how the Chinese economy outgrew the planned system in an evolutionary manner to establish a market economy.

A Chinese study undertaken by Beijing Normal University (2003) reflects how the price mechanism allocates the majority of goods and services in China. The economic value of goods and services traded with price controls decreased for retail goods from 5.6% in 1992 to 2.7% in 2001; for agricultural goods from 10.3% in 1992 to 2.7% in 2001; and for producer goods from 19.8% in 1992 to 9.5% in 2001.

Viewed from this perspective, China's economy is structured by market forces. This market economy, though, continues to be permeated by state influence. Perhaps most importantly, China has so far failed to develop genuine financial capitalism since state firms dominate China's financial system. Several critical sectors also remain almost exclusively in the hands of state firms (e.g., oil and telecoms) and some of their prices continue to be guided by the state.

China's accession to the World Trade Organization (WTO) reflects how the central government is consciously using the introduction of international competition to rationalize market forces and force domestic corporations to improve their efficiency. Nonetheless, China's remains a highly politicized market economy. A realm of the 'economy' that is separate and distinct from that of the 'state' is only slowly emerging. The final point of Heilbroner's conceptualization elucidates this unfinished aspect of China's capitalism.

Heilbroner's final element of capitalism is seldom explicated, even if it is decisive. Capitalism can only emerge with the rise of a "capital-oriented class – originally always a merchant class – from a subordinate position within society to a position of leverage" (Heilbroner, 1985, p. 41). Capitalism thus differs from earlier socio-political regimes, such as those based on religious belief systems, military force or a fixed status hierarchy. The formerly subordinated merchant classes rise in social importance and gain control over strategic resources, making them indispensable to the state.

One cannot overstate this central element of capitalism. Historically, merchant classes have existed at the pleasure of state elites. Capitalism could therefore only emerge as state elites saw it in their interest to support the expansion of capital. But as capital's social status and importance rises, it takes over strategic social functions (e.g., the relatively stable provisioning of state revenue). It is at this point that the act of withholding capital develops into an expression of power and the social force of capital "becomes increasingly capable of defying, or of existing 'above,' the state" (Heilbroner, 1985, p. 94). A relatively autonomous economic realm appears that assures the continued existence and social influence of capital-holders.

The ascendance of capital triggers capitalism's historically most unique arrangement: the bifurcation of secular authority. Capital-holders take over

the major influencing role to guide the allocation of goods and services. The power structures of 'the state' and 'the economy' become different realms, each with its own logic, yet a need to coexist in the same territory. "What we do not ordinarily bear in mind is that this duality of realms, with its somewhat smudgy boundaries, has no counterpart in noncapitalist societies" (Heilbroner, 1993, p. 69).

In order to survive and thrive, capital thus must exist in a mixed state of independence from and dependence on state power. Views of the capitalist system as being based solely on 'free enterprise' and 'free markets' are clearly misconceived. Although the state's full economic power remains in the background during peacetime, it represents a key force shaping capitalist accumulation. Indeed, capital to thrive seeks reconstituted and expanding state power. A free economy thus requires a strong state that can effectively regulate markets, establish stable property rights and institute productive governance structures. As Douglas North maintains, "the search for efficient economic organization leads us to political organization, since it is the polity that defines and enforces the economic rules of the game" (North, 1998, p. 13). The capitalist state, though, needs to be constitutionally constrained, since a relatively autonomous economic realm can only occur with "the recognition of clear 'constitutional' constraints on the power of the state to violate private space of the individual or to commandeer his or her property" (Heilbroner, 1985, p. 89).

In the PRC, the bifurcation of secular authority is merely embryonic. Most individuals and groups in China at present do not seek autonomy but "rather closer embeddedness with the state" (Dickson, 2003, p. 159). This should be viewed as a logical state of affairs at this point. Since the CCP and especially local cadres are highly supportive of the drive to accumulate capital, the interests of local state leaders and capital often converge in 'symbiotic' relations.[4] China's entrepreneurs remain willing to be co-opted by the CCP and support the formation of corporatist links between business associations and state organs, both to gain political recognition and to better access state resources.

Notwithstanding capital's subordinated role, the bifurcation of the secular realm is clearly in the process of unfolding. Several major developments have already taken place, of which I will mention three. First, using a gradualist and pragmatic approach to institutional reform, the Chinese state has eliminated most aspects of the command economy's legacy by waves of state administrative reforms. Therefore, despite certain idiosyncrasies and a relatively large state sector, the PRC now possesses a bureaucratic structure amenable to that of a developing and globalizing market economy (see Zheng, 2004).

Second, the gradual writing and codification of China's legal system improved property rights legislation. Frank Huang remarks that

> The development of property rights in China is an evolving formalization process that may be visualized as a path to increasing clarity. During this process, ideological, jurisprudential and technical constraints have been gradually unraveled, and individual proprietary interests have been steadily crystallized and secured'' (Huang, 2004, pp. 222–223).

Considerations of economic efficiency are thus creating a process of fusing de facto with de jure property institutions and strengthening formal private property rights.

Finally, the CCP realized in the late 1990s that the discrimination of domestic private entrepreneurs was counter-productive. As the most vibrant sector in the economy, producing increasing shares of tax income, employment and technological innovation, the private sector needed to be supported to assure China's continued economic competitiveness. The result has been a gradual process of politically recognizing and incorporating private entrepreneurs into the CCP.

It must be noted that some moves by the CCP are primarily symbolic. Private enterprises continue to face discrimination in financing, market access and regulatory approvals. Private property rights, although enshrined in the constitution, remain vague in reality since legal codes are incomplete and ambiguous. Nonetheless, the symbolism of recognizing private property rights creates crucial political space for capital. My interviews with private entrepreneurs revealed that capital sees itself as a partner of the Chinese state, willing to push for a fairer and less arbitrary system of market norms and rules.[5] It is particularly interested in establishing a less politicized market economy and remains optimistic about the further institutionalization of the Chinese polity.

In the end, Leninist principles of political organization continue to permeate the Chinese political economy. Although a private sphere separate and distinct from the state has emerged and is eroding the government's coercive abilities, moves towards creating effective constitutional constraints on the party-state have been highly circumscribed. The bifurcation of secular authority is merely embryonic.

Viewed from a slightly different perspective, China is undoubtedly undergoing a capitalist transition. Yet, capital-state relations remain permeated by the party-state's dominant influence and the outcome of China's capitalist transition remains indeterminate. Political imperatives, for instance, could cause the CCP elite to roll back reforms, rendering the capitalist transition stillborn. Despite the difficulty of determining the future

course of China's capitalist transition, I will here attempt to provide some pointers to the unique institutional structures that are shaping China's variety of capitalism.

CHINA'S VARIETY OF CAPITALISM

Since capitalism originated in Europe in the 16th century, it has been chiefly regarded as an outgrowth of Western civilization. However, while the concept of capitalism is undoubtedly Eurocentric in origin, capitalism has become the dominant mode of social organization in our era. Capitalism as a socio-economic system, though, is not set in stone. It evolves over time and space into distinct institutional, ideational and distribution of power arrangements. The concept of 'social structures of accumulation' captures perhaps most cogently the forms capitalism can take over time (see Gordon, Edwards, & Reich, 1982; Kotz, McDonough, & Reich, 1994; Lippit, 2005). Correspondingly, the VoC literature emphasizes different institutional arrangements across space, arguing that there is unlikely to be much convergence among distinct forms of national capitalisms.

Different institutional structures of capitalism can therefore be distinguished across both temporal and geographical axes. Capitalism right now is undergoing a period of rapid change under the growing influence of globalization. This era of the 'new global capitalism' is influencing all national forms of capitalism, but most likely with different outcomes in terms of institutions, ideas and power arrangements. China will be no exception, as the country is undertaking capitalist development in this era of rapid technological and organizational advances.

Before I turn to China's absorption into the 'new global capitalism,' some of the institutional structures determined by China's unique national characteristics will be traced. I will argue that China presents a case of state-led capitalist development, though with certain twists. I will also point out that China's capitalist future will be shaped by the large presence of 'network capitalism,' with strong parallels to the political economies of the Overseas Chinese.

State-Led Capitalist Development

As a political economy transitioning from central planning to a market economy, the Chinese state has moved from being the absolute force in the economy to becoming a highly influential one. This process, though, should

not be seen as constituting a retreat of the Chinese state. Rather, the Chinese state has restructured and come to play a key role in initiating, enabling and then guiding capitalist development.

I need to note here the irony of this historical phenomenon: A communist party committed to transcending capitalism has actually initiated and dominated a process that, if sustained, will lead to the emergence of a capitalist political economy. This process is even forcing the stalwarts of state socialism – the state-owned enterprises – to lay off workers, restructure their corporate governance and adapt other capitalist practices. Indeed, workers in state firms have in many cases lost their old cradle-to-grave welfare benefits and been tossed into China's rapidly developing market for wage labor. Despite the irony, though, there are strong historical parallels to earlier instances of capitalist development. China's official ideology might not fit the process, but the party-state's actual behavior does.

Historically conscious analyses attest to the state's critical importance in initiating and advancing the process of capitalist development.[6] As Gerschenkron's (1962) seminal work elucidated, late developers (those following already developed capitalist political economies) tend to harness their financial systems to intimately support the rapid development of industrial firms in cutting-edge industries. Along with this the role of the state becomes pivotal. In Czarist Russia and Meiji Japan, for example, the state became the prime driver of early industrialization. The experiences of post-World War II Asia, when the economies of Japan, South Korea, Taiwan and Singapore experienced rapid industrialization, also reflect such patterns.[7] As with other late developers, most Asian economies in the 1950s were technologically backward. Since indigenous entrepreneurs possessed inadequate capabilities to compete with established multinational corporations (MNCs), a strong state financed industrial development and implemented industrial policies to overcome competitive weaknesses (Wade, 1990; Haggard, 1990).

Unique to Asia's late developers was the presence of 'developmental states' (Johnson, 1987; Evans, 1992). State elites prodded by grave perceptions of national security threats all exhibited a strong 'will to develop.' In coordination with their infant private sectors they used state intervention to continuously upgrade industrial structures. In turn, the capability to plan smartly and carry out industrial policies depended on the existence of small, inexpensive, but elite bureaucracies, generally manifested in 'pilot agencies,' such as the Economic Planning Board in South Korea or the Ministry of International Trade and Industry in Japan. Other institutions supported the actions of these 'pilot agencies,' especially state-owned or state-guided financial systems.

China's path reflects to some extent the earlier experiences of late development in East Asia. As with Asia's late developers, China boasts a very high savings rate, creating a large pool of capital deposited at state banks. This has enabled very high levels of investment in fixed assets (infrastructure, real estate, factories, etc.). China's 'mode of accumulation' thus parallels the earlier experiences of capitalist development in East Asia. Growth relies heavily on fixed asset investment and export-oriented industrialization, while domestic consumption demand lags behind.

Another important parallel to East Asia's late developers is the existence of a strong 'will to develop' among China's state elites. After the tragedies of the Cultural Revolution had caused a loss of revolutionary legitimacy, the leaders of the CCP perceived grave threats to regime survival. Chinese leaders under Deng Xiaoping also realized in 1978 the enormous dynamism and wealth of Asia's capitalist economies. Taken together, these factors prodded the CCP to redefine its purpose to seek economic modernization (Cumings, 1989; Teiwes, 2000). Perceptions of hostile external and internal conditions continue to reinforce a mindset among top CCP leaders that views industrialization and technological upgrading as a means for national and regime survival. As one Chinese interviewee put it, "the CCP has become addicted to high economic growth."[8]

The 'will to develop' would have been insufficient had it not been for the continued ability of the Chinese party-state to implement far-reaching social and economic transformations. Although weakened by Mao's mass movements, the Chinese party-state remained exceptionally dominant over society in 1978. China's leader could thus marshal the state's organizational and ideational resources to alter the incentives facing party cadres to encourage markets, develop new enterprises and integrate with the global economy. No social interests outside of the party-state possessed sufficient power to oppose these sweeping economic and social changes (see Teiwes, 2000, pp. 159–160).

Although the 'will to develop' and the wide use of state agencies to foster economic development contain strong commonalities with the 'developmental states' of East Asia, the historical legacy of China introduces distinct dynamics. First, China's territory is much vaster than those of East Asia's late developers. Owing to its larger production capacity and domestic markets, the PRC followed different economic strategies from those employed by its East Asian neighbors. China's vast landmass also introduces considerable complexities to governance, especially problems of managing central-local relations.

Second, the Communist party-state spent the period from 1949 until 1978 managing a command economy. The PRC's economic reforms therefore

faced a two-pronged challenge: at the same time as they had to overcome the obstacles common to late developers, such as weak financial and enterprise institutions, they had to undertake the extremely difficult transition from a command economy to a market system. This two-pronged challenge left salient impacts on China's quest for industrialization.

For instance, during the first 25 years of reform the PRC did not develop anything akin to the 'pilot agencies' found in Japan, South Korea, Taiwan and Singapore. Only in 2003 did a supra-ministerial agency, the National Development and Reform Commission, emerge that was solely in charge of overall industrial policy planning. Perhaps more importantly, local government autonomy continues to complicate the effective implementation of industrial policies. Duplication of investment projects is very common, leading to industrial overcapacity and wasted financial resources. Finally, China's reliance on state firms has undermined many developmental interventions. Even after almost three decades of reform state firms suffer from oversized work forces and state interference. In fact, many state firm managers do not see it in their interest to maximize profitability or heed central directives (McNally, 2002).

Owing to space constraints, I will not delve into further details concerning the Chinese state's use of institutions and policies to guide capitalist development.[9] Rather, I will point out four major contributions of the Chinese state in undertaking China's capitalist transition. First, the Chinese state has been able to maintain a considerable degree of macro-economic stability. This stability has been enforced during the 1980s and 1990s by the strong sanctions and rewards the Chinese party-state could hand out via its *nomenklatura* system (Huang, 1996). After China's entry into the WTO, the emphasis has shifted to establishing financial institutions modeled on advanced capitalist economies. These institutions have not yet fully matured, so the Chinese state has become adept at ensuring macro-economic stability by using state administrative controls in addition to modern fiscal and monetary tools.

Second, throughout the reform period the PRC government consciously focused resources on the construction of market institutions. Although the process was at first characterized by the unintended consequences of initial reforms creating strong pressures for further reforms (Naughton, 1995), by the mid-1990s the Chinese state was directly aiming to construct a market economy. This involved in the late 1990s the creation of markets for land, housing and real estate, and, perhaps most importantly, labor. More recently, conscious efforts have focused on establishing better capital market institutions, including the creation of markets for foreign exchange and financial derivatives.

Third, the Chinese state's control over the financial system facilitated the rapid expansion of credit to both state-sponsored and privately invested projects. Basically, the state's control over finance has allowed China to keep interest rates low, thereby lowering costs for investors. Parallel situations are common during many instances of capitalist development, especially when financial markets are relatively closed. The European social democratic systems in the post-World War II era facilitated private investment in physical capital via low and subsidized interest rates (Kitschelt, Lange, Marks, & Stephens, 1999, p. 7) as did South Korea and Taiwan (Wade, 1990; Woo, 1991). Naturally, state control over finance has its dark underside as reflected in the amassing of non-performing loans and inefficiencies in the allocation of capital in China (Lardy, 1998).

Fourth, easy credit (or low-risk perceptions by state banks) enabled China to boost very high investment rates and thus generated perhaps the largest boom in fixed asset investment the world has seen. Although there are exceptions during periods when the Chinese state uses administrative measures to squeeze credit growth, credit to state approved projects tends to flow easily. Privately invested projects often find it harder to access China's financial system, but if such projects are favored by local government officials they equally benefit from easy credit conditions. The upshot of this situation has been the rapid establishment of physical infrastructure, producer goods industries and investments in human capital via the vast expansion of the education system.

This list of contributions reveals that China's capitalist development should be seen as a process initiated and dominated by China's party-state, representing in many ways a conscious project of the CCP. In fact, much of what is now considered the non-state or private sector in China actually 'grew out' of the state sector, an issue the next section on 'network capitalism' will take up.

One critical insight we can gain from the Chinese state's influential role in managing a capitalist transition is that calls for the demise of the nation-state in this era of rapid globalization are at best premature. As a poster child for globalization, the PRC attests to the continued importance of the state in initiating, guiding and advancing capitalist development. The dominant position of China's party-state in the economy also reflects its continued Leninist constitution and, equally significant, Chinese history. As Hill Gates (1996) notes,

> The motor of Chinese history was the petty-capitalist tendency toward accumulation unrelentingly harnessed by tributary might, turned to tributary rather than capitalist purposes (p. 8).

In other words, China possessed a strong class of petty capitalists throughout its last one thousand years of history, but the dominant imperial state controlled these for its own tributary purposes. Real capitalist accumulation and the bifurcation of secular authority could thus never progress. This historical legacy has left a deep imprint on the structure of China's small private firms, a topic to which I turn to next.

Network Capitalism

Analyses of East Asia's stunning economic development have distinguished between two broad categories of capitalism, although considerable variations can be found even within these. Asia's pioneer in undertaking capitalist development was undoubtedly Japan, which generated a unique form of 'coordinated capitalism' during the heyday of its capitalist expansion. Central to 'coordinated capitalism' is a strong state that can effectively coordinate investment behavior throughout the economy by directing and guiding private business.

The other form of capitalism distinguished in Asia is 'network capitalism,' which is generally associated with a generic model of Chinese capitalism and therefore sometimes termed 'Sino-capitalism' or 'guanxi capitalism' (Redding, 1990; Hamilton, 1996). As noted above, this form of capitalism is linked to China's history of petty capital under a dominant tributary state, though it has evolved in recent decades. 'Network capitalism' is built from the ground up and does not tend to overly rely on legal contracts and the supervisory role of the state. It rather depends on a myriad of small-scale businesses. In comparison to 'coordinated capitalism,' these businesses do not tend to expand into large bureaucratic structures, but rather achieve wealth accumulation through the multiplication of small ventures (Lever-Tracy, 2002). To overcome the disadvantages of small size, large numbers of firms coalesce into clusters of businesses that can display enormous flexibility in adjusting to changing circumstances. These clusters are linked through horizontal networks of particularistic ties based on trust (*guanxi*), which "provide the underpinning basis for a complex network-based organizational structure" (Robison & Beeson, 2000, p. 13).

Like in the Chinese communities of Southeast Asia, Hong Kong and Taiwan, business networks built on *guanxi* ties have been of great importance in China's capitalist development (Yang, 2002). Throughout the reform era private firms in China faced considerable insecurity. Above all, the status of private property rights was extremely uncertain. Private

entrepreneurs therefore used *guanxi* networks and hybrid forms of ownership to collude with local government officials. Without this, most private firms would have not gotten access to land, obtained business licenses and been able to raise capital (International Financial Corporation, 2000, pp. 20–34). Ultimately, *guanxi* networks compensated for institutional uncertainty and created profit-making opportunities (Wank, 1999).

Given China's vast geographical expanse, several forms of 'network capitalism' have emerged. For example, in Southern Jiangsu most private firms have grown out of privatized state and collective firms. These firms cultivate closely networked relations with their former government supervisors. A very different pattern of entrepreneurship is found in the quintessential capital of China's 'network capitalism,' Wenzhou City. Since there were few locally owned state firms at the outset of reforms in 1978, the family became the entrepreneurial core for the development of a plethora of enterprises. These tend to coalesce into vast business networks, dominating, for example, the world manufacturing of lighters. Some of these networks have also grown far beyond Wenzhou, linking up distant production and sales locales.

Beyond Wenzhou, networks of thousands of small businesses exhibiting fine divisions of labor are common throughout China, creating clusters that specialize in certain product ranges and lock in advantages of agglomeration. Such networks/clusters include Shenzhen (toys, loudspeakers and Christmas decorations), Datang (socks), Shengzhou (neckties), Dongguan (shoes and furniture), Zhongshan (door locks) and Zhuhai (electric lighting fixtures). In many instances such 'competitive networks' have come to dominate global markets in their product area (Zeng & Williamson, 2003).

Gilles Guiheux (2003) provides a detailed example of one instance of China's burgeoning 'network capitalism' located in the city of Yiyang in Hunan Province, which is far removed from China's coastline. The development of a textile production network in Yiyang actually grew out of three state textile firms, which went bankrupt during the 1990s. Since former workers did not receive unemployment insurance or other supports, most of them resorted to becoming individual entrepreneurs, filling the void left by the bankrupt state firms. One of the former state factories gradually converted into a textile market composed of a plethora of privately owned production stalls. The other two rented their premises to larger-scale private firms. In this manner, the real estate of former state firms was directly put to use to support networks of private entrepreneurs.

In essence, Yiyang's private textile producers grew out of the rubble of the city's state sector. The state, though, remains the owner of the premises in which these private textile producers operate. This has generated an

increasingly symbiotic relationship between the empty shell of the former state textile mills and the new private firms. For example, a former factory director acts as the administrative head of the newly established market for textile articles and has become an ardent supporter of the interests of his tenants.

In this process the local government exhibited at first indifference. Only as the textile market and private enterprise gained in economic importance did local government officials start to pay attention. The Yiyang government's move from indifference to support for private firms mirrors developments in other areas of China (see also Unger & Chan, 1999; Blecher & Shue, 2001). Interestingly, the spokesmen for the new entrepreneurs are the former factory directors, who have become both managers and political leaders of the production networks.

The change of heart on the part of the local government can most fundamentally be traced back to the changing structure of China's political economy. With privatization, individual entrepreneurs are free to move across administrative borders to seek the best investment climate. At the same time, the yielding of substantial autonomies to local governments to define their own industrial policies has opened the door to strong inter-jurisdictional competition, with each local authority seeking to attract private enterprises with better investment conditions. The macro-outcome is a rapidly improving investment climate for private firms and the conscious support by local government authorities of 'network capitalism,' especially by setting up designated industrial parks.

China's 'network capitalism' is also being influenced and accelerated by the spread of Overseas Chinese capital into China. Between 1982 and 1994, more than 70 percent of all foreign investment in China came from Overseas Chinese sources (Hsing, 1998, p. 147). Especially in the early 1980s, when China's investment climate was abysmal, investors from Hong Kong used processing arrangements as a reliable and flexible means to take advantage of China's cheap labor pool. Their connections with and demands on local government triggered improvements in China's investment environment and created direct linkages to world markets. In turn, this strengthened local government's bargaining power vis-à-vis the central government.

The prevalence of networked forms of capitalism in China's domestic private sector parallels to some extent the evolution of 'network capitalism' in Taiwan, Hong Kong and Southeast Asia (see Hamilton, 1999). As a result of their clustering, small firms in these networks can increasingly attain economies of scale, access market information and upgrade their product quality and technology, in the process driving down manufacturing costs.

By linking up with production networks already established by Overseas Chinese, China's network capitalists are also able to integrate their firms with global production networks, allowing them to improve their marketing in export markets and pool resources for research and development purposes.

Perhaps the closest analogies are to the case of Taiwan. Capitalist development in Taiwan and the PRC has been characterized by a certain duality. On the one hand, a large state sector dominates the commanding heights of the economy and is the direct counterpart to the central government's industrial policies. On the other hand, this state sector coexists, and in the case of China, melds with a private sector characterized by a myriad of small- and medium-sized firms structured by networks based on *guanxi* relations. Put differently, while producer goods sectors, transportation and finance are in the state's hands, the vibrancy and outward orientation of the economy is being driven by 'network capitalism.'

Development under the 'New Global Capitalism'

The final characteristic of China's emerging capitalism is shaped by the world historical timing of China's entry into the global capitalist system. After the fall of communism in Eastern Europe and the Soviet Union and the implementation of market-friendly reforms in Latin America, South Asia and Southeast Asia, capitalism is for the first time in world history being propelled by domestic forces covering much of the globe. The rapid increase in international capital flows most succinctly expresses this new era (see Simmons, 1999). In addition, the high-tech boom in the United States fuelled a massive increase in new ventures, new knowledge and new business models. The individual entrepreneur is once again at the center of capitalist accumulation.

China is undertaking capitalist development under the 'new global capitalism' with far-reaching effects. Unlike earlier late developers in Asia, China could not opt for a policy of keeping most forces of global capital at bay while building up indigenous capacities. Rather, Chinese policy makers faced with the pressures and opportunities of globalization opted to gradually open the economy to large amounts of foreign direct investment and trade.

As David Zweig (2002) explains, much of this openness was not by central design. To be precise, politically motivated efforts to reintegrate Hong Kong, Macau and Taiwan with the PRC led to the establishment of special

economic zones along the southeastern seaboard, in turn attracting the first waves of Overseas Chinese investment with their more liberal environments. Nonetheless, large segments of China's political establishment tended to be neo-mercantilist at least up until the late 1990s. Opposition to strong internationalization therefore existed, but was run over by the many unintended consequences flowing from China's open door policy.

Put differently, although initiatives by top leaders catalyzed China's international opening, it was a bottom-up process that propelled it. Driven by cultural affinity and China's comparative advantage in cheap labor, Overseas Chinese began in the 1980s to set up vast production networks. Their capital worked wonders, winning over cadres who, rather than enforcing restrictive central regulations, opted to use their grassroots regulatory authority to facilitate international exchanges. A domestic hunger for global linkages was unleashed that generated economic gains for China's local bureaucrats and, more importantly, linked coastal communities with the global market, paving the way for them to become the 'workshop of the world.'

Local adjustments to the demands of investors driven by inter-jurisdictional competition interacted with efforts by the central state to construct a more market-friendly regulatory environment. Cycles of induced reforms unfolded, creating a much improved investment climate by the late 1990s. Consequently, large MNCs became attracted to China's potentially huge consumer market and its cheap and increasingly skilled labor pool. These developments took a major leap forward with China's entry into the WTO in 2001. WTO accession is not only opening vast slices of China's market to foreign investment and trade it is also pushing forward the establishment of an investor-friendly institutional infrastructure.

Both domestic and international factors have therefore interacted to accelerate China's absorption into the 'new global capitalism.' In hindsight, the increasing permeability of national barriers to world trade, the rising flows of capital and information, the expanded influence of international organizations and the increasing ability of manufacturers to move swiftly to regions with favorable endowments have all created enormous costs to any nation seeking to insulate itself from globalization. Owing to the timing of China's capitalist transition, the 'new global capitalism' opened China as much as China opened to the world.

The historical timing of China's capitalist transition in combination with its unique national characteristics generates four characteristics that are noteworthy. First, China's rapid enmeshment into the global capitalist system has allowed its economy to become a central node of the world

economy with special significance for Asia's regional integration. At first, networks of ethnic Chinese investors built bridges integrating China with Asia, but soon global production networks incorporating MNCs and regional players started to base assembly operations in the country. After WTO accession, these networks are upgrading to more value-added production processes while undertaking global research and development efforts.

Second, although interdependence with the global capitalist system is constraining Chinese policies, the country's increasing weight in the world economy gives it substantial international influence. For instance, China's WTO accession and continued engagement with MNC leaders stands testament to how Chinese policies are constrained by the need to continuously attract international capital, technology and managerial skills. Yet, China can resist demands by its major trading partners, especially the United States, concerning, for example, its currency policies. When facing a similar situation, Japan, South Korea and Taiwan were unable to stand firm since they were too dependent economically and militarily on the United States (O'Neil, 2005).

Third, China's international economic influence is not only a result of its size but also of its relative openness. The relentless opening of sector after sector to foreign trade and investment has made China one of the largest global importers of raw materials, machinery and equipment. Global markets will therefore be increasingly shaped by Chinese economic events. Large shares of Foreign Direct Investment (FDI) and international trade have also transformed China into the darling of corporate chiefs in North America, Japan and Europe. The unintended but important consequence of this is that China has created powerful domestic lobbies within its trading partners. These want to keep the China trade flowing. For example, China has become very important as a production base for U.S. MNCs and thus their corporate profits. The probability that the U.S. government would act in a radical manner to protect domestic markets from Chinese goods is therefore low, although the going will get rougher as China gains competitiveness in higher value-added activities.

Finally, strong incentives to attract international capital have created economic spaces that are divorced from China's domestic economy but highly integrated into global production networks. The industrial parks in Suzhou and Kunshan adjacent to Shanghai are examples of how certain jurisdictions are adopting a 'Singapore model' – they rely on MNC capital for domestic economic development. This model is achieved by establishing industrial areas that are segregated from the domestic economy at large and

provide excellent hard and soft infrastructures, producing governance systems for the sole purpose of accommodating MNC capital.

The consequence of this last point is that China's capitalist development is producing many distinct local political economies. Some of these resemble Singapore by their dependence on MNC capital. Others rely heavily on Overseas Chinese network capital that melds with China's indigenous 'network capitalism.' And yet others are anchored in the lasting importance of China's state sector, sometimes cooperating with international capital, in other instances going their own way with massive state support. Naturally, some areas of China have seen little or no development, leading to severe forms of internal exploitation and underdevelopment. The upshot is that there are a plethora of 'capitalisms' within China exhibiting varying levels of development and internationalization. China constitutes a patchwork of local political economies, none of which fully dominates.

CONCLUSION: STUDYING CAPITALIST TRANSITIONS

China's historical legacy, enormous size and rapid absorption into the global capitalist system are giving rise to unique institutional arrangements. China is therefore generating a distinctly new variety of capitalism, incorporating aspects of the East Asian model of state-led capitalism, 'network capitalism' and the 'new global capitalism.' As noted above, this new form of capitalism manifests a marked duality. State-led capitalism in which the state owns and guides the commanding heights of the economy coexists with vibrant networks of small-scale capitalist producers. The contours of China's variety of capitalism therefore encompass state-led development from above and network-based development from below. The meeting point between these two processes lies at the lower levels of the state-administrative apparatus, where local cadres have played a crucial role in initiating, enabling and sustaining capitalist accumulation.

Perhaps the strongest parallels to this duality can be found on Taiwan, where state firms have dominated most producer goods sectors while 'network capitalism' characterized the island's formidable export machine (Hamilton, 1997). There are also some analogous features with the case of Italy (see Orru, 1997). Nonetheless, Taiwan constitutes a much smaller political economy in which the Taiwanese central state has been able to quite effectively implement its policies throughout the economy. In contrast, China's new capitalism exhibits large variations among different localities.

Local cadres act to set their own market, investment and production rules, thus creating distinct local variations. Some of these variations might decline with continued internal economic integration, but homogenization on the level of the United States is unlikely to emerge.

Although I have attempted to delineate certain institutional features of China's emergent capitalism, I must emphasize that the outcome of this historical project remains indeterminate. The difficulty of conclusively mapping China's variety of capitalism, though, forces us to delve deeper into the nature and logic of capitalism per se. In fact, any effective conceptualization of VoCs in the developing world will first have to come to terms with how capitalist transitions unfold in practice. With this in mind, I introduced the insights of Robert Heilbronner. I applied his conceptualization of capitalism to crystallize the areas in which China is already highly capitalist – the drive to accumulate capital and the emergence of a market economy. I also pointed out how state-capital relations in China continue to create insufficient institutional certainty and predictability for domestic investors. Heilbroner's insight on the bifurcation of secular authority therefore allowed me to draw attention to the degree to which China's capitalist transition remains a work in progress.

Viewed from another vantage point, we must reintroduce politics to the study of institutional political economy, especially the struggles and accommodations between state and capital that are unique to capitalism. For sure, radical political economy has analyzed at length conflicts of interest and the exercise of power under capitalism, but much of this concentrates on the relations between capital and labor. The cases of China and other developing countries in East Asia, however, indicate that perhaps priority of analysis should be given to the nature and logic of state-capital relations. "The immediate central issue in capitalism … is the relationship between business and government, or from our more distant perspective, between the economy and the state" (Heilbroner, 1993, p. 68).

An emphasis on state-capital relations might also be the best starting point for creating taxonomies of developing and evolving capitalist systems. As approaches in political economy, sociology and organization theory elucidate, institutional arrangements within a given field exhibit a certain isomorphism. Markets, ideational systems, state institutions, social interest alignments and organizational features cannot in isolation account for the emergence and persistence of observed forms of capitalist political economies – "the various institutions of a society are mutually determinative; each one contributes to overdetermining the others" (Lippit, 2005, p. 29). As the complementarities debate in the VoC literature elucidates, institutions must

to a certain extent be compatible with each other to advance capitalist accumulation and establish international competitiveness.

Consequently, we can hypothesize that state-capital relations (including the respective constitutions of state and capital) might comprise the linchpin which calibrates the character of other institutional arrangements in a given political economy. This is to some extent reflected in the VoC literature and studies of the Asian developmental state. The case of China also mirrors this, since the role of the state constrains and enables spaces for 'network capitalism' and MNC capital. At a minimum, a fine-grained analysis of state-capital relations could serve as a welcome starting point for an encompassing taxonomy of VoCs in the developing world.

Finally, a focus on state-capital relations could serve as a means to better capture change in individual political economies and on the global level. Since capitalism is in continuous flux and has shown a stunning ability to reinvent itself, analyses of capitalist political economies must be much more concerned with the nature and logic of change. This is especially the case for developing economies. The transformational role of state elites and the never-ending search for new profits and markets by capital (and thus changes in relative prices) are key factors driving change under capitalism.

Capturing the nature of change is certainly central if we want to understand the core tendencies shaping China's capitalist transition. Accordingly, I will build on the foregoing analysis and attempt to highlight possible future scenarios facing China's political economy. To begin, China's capitalist transition has unleashed enormous increases in productivity, drawn large segments of rural society into capitalist relations of production, and integrated China's political economy with the world capitalist system. However, as with other capitalist transitions, China's is facing the strains created by its own successes. Put differently, the 'social structure of accumulation' established under Deng Xiaoping and his successors has generated a single-minded pursuit of economic growth on the part of local governments. Although sometimes restrained by central policies, this 'growth above all else' attitude remains part of the CCP's incentive framework.

Over the past years the contradictions of China's reform era 'social structure of accumulation' have become increasingly evident. Most prominent are environmental degradation on a grand scale; the eviction of poor people from their land and homes in order to commercialize more land for construction and real estate; mounting instances of corruption and popular dissatisfaction with governance; rapid migration of rural residents to cities

and the resulting stresses of urbanization; the accumulation of inequalities between the winners and losers of reform; and the failure to establish a restructured and effective social protection system.

How China deals with these enormous and mounting contradictions will in many ways decide the outcome of its capitalist transition. One option is that institutional change in state administration, law and other spheres is sustained and supports continued advances by China's capitalism. The rule of law would be buttressed, emerging political interests incorporated into the polity, and a greater degree of social and environmental justice attained. Under this scenario, China's Leninist party-state would gradually be nudged toward becoming a 'constitutional' state with significant implications for internal political change.

A second possibility is that present arrangements stay in place with very limited progress taking place. In this scenario the legacy of China's imperial system would continue to hold sway, entailing the state's dominance over private commercial and industrial capital. The reform era 'social structure of accumulation' would thus be refined and sustained. However, given China's present social and environmental stresses it is questionable how long these arrangements can stay in place. Already the CCP is tinkering with the cadre incentive system to press for greater social and environmental accountability on the part of local cadres, though so far with not much success. The cases of Japan and South Korea also demonstrate that even under Confucian cultural precepts a capitalist transition is in the long run likely to create pressures for a more liberal polity.

A final option is that by seeking to retain its monopoly on legitimate political organization at any cost, the CCP acts to stall China's capitalist transition. Limitations to the security of property rights and sway of markets would force Chinese entrepreneurs to continue their clientelistic ties with the party-state. China's variety of capitalism might then become stuck in a form of 'Chinese crony capitalism.'

These scenarios will have significant implications for the world. If 'Chinese crony capitalism' emerges as the dominant feature of China's political economy, China could face a prolonged period of economic stagnation and social unrest. East Asia's economic boom of the early 21st century might then seem like a distant mirage. Conversely, if China sustains its variety of capitalism under state tutelage, greater internal and external frictions are likely. Indeed, a state-sponsored form of capitalism on China's scale could prove to be highly destabilizing for the global capitalist system. Mounting financial and trade imbalances could then trigger protectionist sentiments among both established and rising capitalist political economies.

Finally, China might gradually develop a 'constitutional' state, though most likely with distinct Chinese characteristics. China's budding capitalists could then emerge as a truly competitive force, fundamentally altering the nature and logic of global capitalism. As Ronald Dore (2000) notes

> there is a good chance that in 20 years' time it will be China which is the world leader in scientific research, and in product and process innovation. And China by then could well have such a weight in the total world economy that the form its capitalism takes will have a considerable influence on the rest of the world (p. 239).

Under this scenario, China might perfect aspects of the 'new global capitalism,' meld these global forces with its vibrant 'network capitalism,' and define a new role for the state under globalization. Whatever the outcome, the emergence of China as a major capitalist political economy is already altering the landscape of institutional arrangements on the national and global level. Undoubtedly, China will leave its unique imprint on 21st Century capitalism.

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NOTES

1. See, for example, Hsing (1998), Guthrie (1999) and Gallagher (2005).
2. See, for example, the classical Shonfield (1965) and Albert (1993), as well as the more recent seminal volume by Hall and Soskice (2001).
3. Between 1978 and 1982, total household savings in China jumped from 4% of national income to 11% (Naughton, 1995, p. 142).
4. For historical and comparative examples of 'symbiotic' state-business relations see Gerschenkron (1962), Waterbury (1993, Ch. 8) and Laothamatas (1994).
5. Informants 20–30, 83, 182. Interviews were undertaken during the summers of 2001, 2002, 2004 and 2005. All interviews were conducted without the aid of translators in either Mandarin or Cantonese. Interviewees were assured of utmost confidentiality, and a coding system has been employed to protect their identities.
6. For a comprehensive overview of the role of the state in economic development see Reinert (1999) and Chaudhry (1993).

7. Hong Kong is also generally included in this group undergoing rapid capitalist development. However, the role of the state in this colonial political economy remained more circumscribed.
8. Informant 181.
9. See on this, for example, the recent works by Yang (2004) and Zheng (2004).

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VARIETIES OF CAPITALISM AND INSTITUTIONAL CHANGE

Jonathan Perraton

1. INTRODUCTION

Institutions underpin the operation of national economies. These differ significantly between countries reflecting varying historical paths, policy choices and national cultures. Moreover, they need to be understood systemically as an ensemble of relations between their component parts: financial systems, corporate governance, industrial relations, patterns of state intervention, etc., have evolved together so that their operation and effects tend to reinforce each other. Different countries faced by common exogenous changes will tend to evolve along different lines rather than converge. National institutions matter: they significantly affect economic performance and distribution.

Until relatively recently such propositions would probably have marked their proponents out as avowedly institutionalist; indeed Hodgson (1999, esp. Ch. 6) explicitly contrasts this approach with the universalism of other, particularly neo-classical economics and Marxist, approaches. Whilst there were clear differences between 'new' and 'old' institutionalist schools these can be over-stated and empirical examinations of longer term economic performance by scholars from both traditions typically invoke a similar set of variables with similar predicted impact (e.g., Hodgson, 1996; Rutherford, 1994). From either a 'new' or 'old' perspective, institutional arrangements

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are expected to be enduring. We would expect to see a diversity of institutional arrangements across national economies and would not necessarily predict convergence either in response to common exogenous developments or differences in performance. More recently, though, mainstream economics appears to have undergone a rapid transformation in its approach to institutions, having shifted from ignoring them to incorporating them once suitable proxies can be found for empirical testing and now moving towards a position of institutional determinism. Some of this work amounts to an application of the Coase theorem – usually downplaying consideration of whether the necessary conditions hold in practice – viewing institutions as more-or-less efficient adaptations to local conditions and traditions. Thus, institutions – or some institutions at least – are now regarded as necessary complements to the efficient operation of markets (e.g. World Bank, 2002). In recent work, though, institutional structures are not merely asserted to have a decisive impact on economic performance but are determined by factors lying long in a country's past leading to very strong persistence. A recent analysis by World Bank associated economists of the admittedly extreme case of mineral exporters (and no doubt in the shadow of attempts to impose new institutional structures in Iraq) ends up not with the customary policy advice but effectively concluding that, given the institutional inheritance of many of these economies, that there is little that could be done at least in the short term to affect their performance significantly (Isham, Woolcock, Pritchett, & Busby, 2005). As orthodox economics appears to have rapidly made a transition from institutional blindness to institutional determinism it is worth asking how far this line of enquiry can provide further illumination of institutional differences and institutional change. If key elements of analysis of the institutional basis of comparative national capitalisms are now widely accepted, it may be time to try to move this analysis forward.

This paper follows from earlier collaborative work tracking institutional change amongst developed economies since the 1980s (Perraton & Clift, 2004) and work on a transformationalist approach to the impact of globalization (Held, McGrew, Goldblatt, & Perraton, 1999). It is regularly claimed that the orthodoxy here is that globalization is leading to convergence on to an Anglo-Saxon norm and that analysis in the national capitalisms literature decisively refutes this. To pick recent examples, more or less at random, in a review of Schmidt (2002) on the future of European capitalisms, Zeff (2005) argues that the volume 'refutes the conventional wisdom that globalization and Europeanization will erase the defining differences among these countries'; Campbell (2004, p. 124), in a volume

which actually shares many of the concerns of this paper, argues that 'contrary to much conventional wisdom … globalization has not precipitated the sort of dramatic institutional change in taxation and other policy areas that are often attributed to it. Instead, the effects of globalization on key institutions have been much more modest and evolutionary.' He then cites in 'books critical of the conventional wisdom' several of the leading academic texts on globalization (including Held et al., 1999).

Set in these terms this literature does point to continued institutional diversity amongst the developed countries and the absence of clear evidence of convergence onto one set of institutional arrangements. Nevertheless, the focus on refuting hyper-globalization claims which have few academic proponents risks downplaying the effects of globalization more generally (Perraton, 2001). The transformationalist account by contrast views globalization as a process rather than an end-state (cf. Held et al., 1999; Perraton, 2003 from which this paragraph draws). Globalization can be conceived of as a process, or set of processes, which embodies a transformation in the spatial organization of social relations and engenders a shift in the spatial reach of networks and systems of social relations to transcontinental patterns of human organization, activity and the exercise of social power. More specifically here we focus on the effects of the emergence of global product and financial markets and the international organization of business. This entails a stretching of economic activity across frontiers, regions and continents. The growing extensity of economic activity is combined with an intensification, or the growing magnitude, of interconnectedness and flows of trade, investment, finance, etc., so that domestic economic activity is increasingly enmeshed with activity elsewhere. In this sense, the boundaries between domestic matters and global affairs become increasingly fluid. Networks and infrastructures have emerged to facilitate these interactions and institutions have emerged to regulate them. Such developments are rarely uniform and typically display clear patterns of hierarchy and unevenness. Globalization is not a singular condition, a linear process or a final end-point of social change. Although the impact of globalization processes is affected by the extensity and intensity of the processes, it cannot simply be read off from them and it should not be seen as a substitute for established social science approaches to assessing the impact of social relations, but instead it complements them by illuminating the specific role played by the intercontinental dimension of social relations and indicating how established tools should be modified and applied to understanding these relations. Globalization does not simply denote a shift in the extensity or scale of social relations and activity. Fundamentally,

transformationalists argue, it also involves the spatial reorganization of the exercise of power. Globalization can thus be understood as involving a shift or transformation in the scale of human social organization that extends the reach of power relations across the world's major regions and continents. Although evidence does point to higher levels of international economic activity, the primary issue here is not quantitative changes but qualitative transformations as previously nationally based organization of economic activity now faces global product and asset markets and international networks of production (see also Lysandrou, 2005).

This paper proceeds as follow. Section 2 examines attempts to delimit contemporary varieties of capitalism. Section 3 examines whether there are systematic relations between institution arrangements and differences in economic performance. Section 4 examines trends in state intervention amongst contemporary developed economies. Sections 5, 6 and 7 examine differences in wage-labour relations, financial systems and welfare protection, respectively. Section 8 examines changes in national ensembles of institutional relations in countries as a whole and Section 9 concludes.

2. HOW MANY CAPITALISMS?

Authors vary in their classifications of types of capitalism; rather than review the various proposed schemes and labour over inconsistencies and ambiguities, this paper focuses on two main intellectual traditions here. A distinction can be drawn between a 'variety of capitalisms' approach generically – a commitment to the general approach to institutional differences outlined above – and the specific 'Varieties of Capitalism' (VoC) approach. The latter proposes a binary classification between co-ordinated and liberal market economies (CMEs and LMEs) according to their organization of production and market institutions (Soskice, 1999; Hall & Soskice, 2001; cf. Freeman, 2001): this determines, in particular, primary variations in the structures of industrial relations and wage bargaining systems; education and training; company financing; and inter-firm relations. Whilst globalization can exert exogenous pressure for change, the VoC approach in particular emphasizes that institutional differences are key sources of comparative advantage which in itself provides a mechanism whereby integration would tend to lead to the preservation of national differences as much as providing pressure for change (Hall & Soskice, 2001). Institutional relations in each country are typically claimed to have evolved to form a mutually reinforcing ensemble; Soskice (1999, p. 109), for example, argues

that 'there are strong interlocking complementarities between different parts of the institutional framework. Each system depends on the other systems to function effectively.' These ensembles can then produce efficient outcomes even where a particular component transplanted into another system might be inefficient. There are different levels of claims about performance here. Some versions specifically argue for superior performance of particular systems, others simply predict that coherent models will produce broadly efficient outcomes.

This binary approach has been criticized on a variety of theoretical and empirical grounds and various attempts at further sub-division have been proposed. The key alternative approach derives from regulation theory (Amable, 2003; Boyer, 2005). Boyer (2005), in particular, details the limitations of the VoC approach in terms of its concentration on firm governance as the key determinant of institutional differences over systemic arrangements. More generally, classifications based upon singular aspects of different capitalisms – labour relations and the welfare state have also been proposed – miss conceiving institutional arrangements operating as a mutual ensemble at the societal level. There are further methodological issues here. The VoC analysis and related approaches have strong affinities with new institutionalist analysis leading to a relatively static conception of capitalist systems as the equilibrium outcome of social processes with the evolution of conventions through repeated games; such an approach tends to see disruption to institutional arrangements and major change as only resulting from exogenous shocks. Boyer (2005) proposes that the VoC approach's classification of CMEs can be more usefully be subdivided into (at least) three ideal types: meso-corporatist, social democratic and state-led as well as a market-led group that effectively corresponds to the liberal market economies. Boyer argues that drawing out these ideal types enables an analysis of the internal logic and dynamics of different systems as ensembles of relations. Boyer (2005) points to more dynamic conceptions that can help explain the endogenous features of models of capitalism leading to crisis and change. As Coates (2000, Ch. 8) argues from a somewhat different perspective, the search for a persistently superior model has been chimerical in the past and is likely to continue to be – not only did the main models exhibit glaring difficulties, but more fundamentally capitalist growth processes tend to be uneven both over time and in their distributional consequences; the impact of institutional arrangements on economic performance is considered in the next section.

Despite clear conceptual differences in the approaches, devising tests to distinguish between hypotheses here faces particular problems. There is, as

noted above, considerable overlap in terms of the predicted impact of particular institutional arrangements. Moreover, approaches here are not simply attempts to derive a priori predictions, but as much an attempt to provide coherent explanations for observed institutional configurations that differ from market-based coordination but nevertheless produce efficient solutions. Statistical testing of theories tends to be limited both by inadequate data proxies for relevant variables and a degrees of freedom problem with only around 20 developed countries for analysis. Advancing game theoretic models consistent with observed arrangements typically provides a weak test of any hypothesized explanation. Although there is frequent invocation of evolutionary game theory here (e.g. Aoki, 2001; Amable, 2003, Ch. 2), there are several problems with such an approach chiefly: the 'folk theorem' that repeated games produce indeterminate outcomes; the infinite regress problem in providing an account of the evolution of the game's rules (Mirowski, 1986); and historical questions over the adequacy of such explanations.[1] Explanations within the regulation tradition by contrast view the ensemble of institutions as more readily explained in terms of the outcome of a political equilibrium (Boyer, 2005; cf. Campbell, 2004).

Mapping ideal types onto evidence from contemporary economies is inevitably somewhat imprecise and ambiguous. Recent analyses, whilst they are based on theoretical priors, allow the data to 'speak for themselves' through cluster analysis of relevant variables producing broadly similar patterns (Amable, 2003; Pryor, 2005). Amable (2003, Ch. 5) finds – based upon analysis of levels of product market competition, the wage-labour nexus, the financial sector, social protection systems and the education and training system – that developed economies broadly cluster around five groups: the market-based or LMEs; social democratic countries; Asian capitalism; continental European capitalism and a Southern European or Mediterranean group. Most country groupings conform to expectations, with some interesting exceptions: Norway appears in the continental European case, having been classed in the Anglo-Saxon group in an earlier version of this analysis, despite its social democratic heritage (*ibid.*: Ch. 3). Ireland emerges as a continental European economy, unlike other English-speaking countries. There is evidence of further fragmentation within this basic classification with a 'European integration' group that already had France, Germany and the Netherlands in and now includes Belgium and Ireland; an 'Alpine' variant of this group comprising Austria and Switzerland and a Mediterranean variant comprising Greece, Italy, Portugal and Spain. Ignoring the small Alpine group – Switzerland presents difficulties in classification whilst Austria has some similarities with the social democratic group (cf. Glyn,

1992; Heinisch, 2000) but comes out as clearly continental European elsewhere (Pryor, 2005) – a five-fold classification appears to be appropriate; there do appear to be distinctive arrangements in terms of welfare systems and corporate governance amongst Southern Europe countries, although the position of France between this and the continental European group remains ambiguous.

Basic patterns of difference and institutional coherence can be discerned. The characteristics and logic of the market-based system, Asian capitalism and social democratic economies are well known. The interesting cases here the European capitalism groups: this includes both countries like Germany which operated somewhat meso-corporatist relations based around industry level organization and bargaining, but with less state co-ordination than Asian capitalism, and countries like France and the Southern European economies where the state played a central coordinating role. It is therefore not surprising that this group has attracted considerable debate over whether – in the face of pressures to increase product and labour market flexibility and shifts away from traditional financial arrangements – institutional arrangements are cohering into an effective ensemble (Amable, 2003, Ch. 6; Schmidt, 2002).

Amable took evidence that differences in these categories appeared to have persisted since the 1980s as evidence against a convergence-through-globalization hypothesis:

> The broad categories found for economies at the end of the 1980s still existed at the end of the 1990s. This is a weak confirmation of the non-convergence towards the market-based system. Only Norway seems to have made a significant move in that direction. Otherwise, the SSIPs [Social Systems of Innovation and Production] have kept their distinctive features. However, subsystem analysis does not show that the SSIPs have remained unchanged. Quite the contrary, it provides glimpses of a deeper infiltration of certain market-based mechanisms in most economies. This advance of market-based mechanisms is localized in a finite number of subsystems, namely the financial sector and the labour-relations subsystem, and is epitomized by the progressive transformation of the SSIPs rather than by any radical transformation (Amable, 2003, p. 92).

This raises key issues here. The assumption of institutional fitness amongst the ensemble of relations does not imply either that any substantive change in one institutional arrangement would lead to the unravelling of the whole ensemble or, alternatively, that any form of institutional change in one area is compatible with the persistence of the general ensemble of relations (e.g. Amable, 2003, Ch. 2). Nevertheless, there are questions over the degree to which institutional arrangements can differ in their internal logic within one national ensemble (Lane, 2003).

Pryor (2005) also uses cluster analysis on data from the early 1990s on differences in product market regulation, labour market institutions and business ownership and organization patterns. Even here there are problems as some of the classifications are based upon subjective assessment surveys. The number of clusters here depends on the procedures chosen, but comparing a five-fold classification provides similar results: an Anglo-Saxon group, this time including Ireland; a social democratic group, this time including Norway; a central European group and a Southern European group, with France in the latter group; with Japan as the only Asian country included here it ends up in a group of its own (Amable also includes Korea).[2] Interestingly a whole series of variables often assumed to be central to differentiating economic systems fail to play a significant role in this cluster analysis, including: various measures of government activity; business clusters; centralization of labour organization; creditor rights; restrictions on bank activities (Pryor, 2005, p. 36). Pryor acknowledges that this analysis is static and only goes up to 1990; missing data limits the possibilities for tracking changes over time, noting that 'many of the institutional characteristics defining types of economic systems have been changing over time.' Moreover, many of the indicators used here are inherently relative not absolute and as such would limit any attempt to test for convergence. The point here is not to explore ambiguities of country classification or query the optimal number of groups but to explore questions that are more generic to this approach. We consider the component parts of the models in more detail below, but now turn to the impact of these institutions on economic performance.[3]

3. INSTITUTIONS AND ECONOMIC PERFORMANCE

There has been much concern in this literature with performance differences between developed economies. Globally it is hard to account for the range of levels of income per head and productivity observed between countries simply in terms of human and physical capital stocks and available technology – institutional differences appear to be important to explaining this. Institutional differences amongst developed economies are expected to impact on the key determinants of growth: financial systems have a key role in channelling investment funds, but national institutions are also expected to affect the nature of human capital formation and technical progress in different countries.

Recent studies using various classifications find that the impact of institutions on economic performance amongst developed countries is

secondary; their chief impact is on income distribution (Freeman, 2001; Pryor, 2005; cf. Coates, 2000). This conclusion appears robust to controls and variables used to determine institutional type. Levels of income per head have tended to converge amongst developed countries in the post-war period, although this needs to be qualified particularly in relation to hours worked (Gordon, 2004). Income convergence processes amongst developed countries are now fairly well understood. The performance on other indicators, such as unemployment or inflation, typically depends on the period of comparison chosen. The evidence on inflation shows clearly that rates were both generally lower and converged in the 1990s compared with the 1980s. The evidence on unemployment shows no clear pattern since the end of the post-war Golden Age, partly due to the worsening unemployment performance of the Scandinavian economies in the 1990s. The question of institutional impact on unemployment is considered further below, but the evidence that labour market regulations, trade union activity and minimum wages significantly affect unemployment levels is weaker than often claimed (Baker, Glyn, Howell, & Schmitt, 2005; cf. OECD, 2004, Ch. 3).

Much of the literature could be seen as talking past this. Emphasizing that an ensemble of institutions can be efficient means that one would not necessarily expect performance differences. The VoC approach in particular emphasizes that institutional differences can be important sources of comparative advantage which in itself provides a mechanism where integration would tend to lead to preservation of national differences and mutual gain (Hall & Soskice, 2001). Whilst gains from trade specialization are essentially static and over the longer term institutional differences could affect technical progress and human capital accumulation, typically contributions argue institutional differences affect the nature rather than necessarily the rate of technical progress. In the binary approach, liberal market economies are more geared towards radical, discontinuous innovation: their capital markets are more geared towards venture capital and other mechanisms for raising finance for radically new projects, their employment systems allow for radical changes in work practices (Hall & Soskice, 2001; cf. Allen & Gale, 2000; Houben & Kakes, 2002). Conversely, these same characteristics give LMEs a relative disadvantage for incremental investment: emphasis on current profits and flexible labour markets tends to limit long term investment in incremental innovation and associated firm and industry specific skills formation. Approaches that stress greater differentiation amongst varieties of capitalism nevertheless makes broadly similar predictions about innovation patterns (Amable, 2003, Ch. 3). Hall and Soskice (2001) find

evidence – from a limited period – that patterns of innovation between developed economies accord with these prior expectations. There is a 'hare and tortoise' quality to expectations here: besides static gains from specialization, studies are inconclusive on whether specialization in particular products affects long term growth prospects and the relative rates of technical progress between liberal and co-ordinated market economies over any period would depend on whether the period was characterized by breakthrough technologies or relative stability.

There is some evidence that patterns of trade specialization conform to expectations, although with inevitable ambiguities in terms of particular sectors and the classification of certain countries (Allen, Funk, & Tüselmann, 2006).[4] However, Taylor (2004) shows that the empirical support for these propositions is weak and critically dependant upon the inclusion of the exceptional case of the US. Taylor finds that the classifications in terms of whether industries tend to be characterized by incremental or radical technological change largely fits with Hall and Soskice's classifications in terms of patent data. However, significant differences in terms of patent patterns between the two groups of economies do not appear to be found, including use of forward citation patents as an indicator of radical innovation. Japan, somewhat contrary to expectations, appears to have the characteristics of a radical innovator based on this patent data. Alternatively, surveying the output of scientific papers in these countries – an innovation process subject to different incentives from patenting but often assumed to reflect the country's institutional milieu – produces similar results that there is no clear pattern between the nature of the economies and the research undertaken. Neither of these is necessarily directly related to national economic performance and productivity growth, although the national systems of innovation approach presumes that the connections are likely be close. However, Frantzen (2000), for example, finds that outside the largest G5 economies foreign R&D expenditure has a stronger impact on productivity growth than domestic R&D expenditure; globalization may thus be eroding national systems of innovation (at least amongst smaller economies) in any case. There is a strong emphasis in this literature on the presumed tacit nature of technological innovation ensuring that much of the innovation remains localized in the country, or sub-national region, and often embedded in firm-specific routines and practices (e.g. Amable, 2003, Ch. 3; Aoki 2001, Ch. 12; Hodgson, 1999, Ch. 6). Besides empirical questions on how localized technological knowledge actually is, there are considerable difficulties with the concept of tacit knowledge (Cowan, David, & Foray, 2000; Pleasants, 1999, Chs. 4–5; Perraton & Tarrant, 2006); it is debatable whether invoking this

concept can bear the weight of explaining links between institutional arrangements, patterns of technological innovation and the industrial structure and performance of national economies.

The thrust of the both major approaches here is not that one particular model is superior but that coherence amongst the core institutional arrangements will lead to superior performance as they reinforce each other in the manner outlined above: complementary institutions act to raise the positive impact of others (e.g. Amable, 2003, Ch. 3). Thus, Amable (2003, Ch. 5) found that over 1989–2001 institutional variables were only weakly related to growth and unemployment performance; using interaction terms, though, considerably strengthened the estimates. It is not that particular institutions are expected to have an unambiguous impact on performance, rather that particular combinations of mutually reinforcing institutions can produce efficient results. However, Kenworthy (2006) finds that various measures of institutional coherence here fail to have any significant impact on either GDP or employment growth over the post-1973 period; the efficiency claims about complementary ensembles of institutions do not appear to be borne out by the evidence.

The lack of a clear relationship between institutions and economic outcomes should hardly be unexpected to economists in the institutionalist tradition or necessarily seen as undermining this approach. Those in the 'old' institutionalist tradition at least would be sceptical of the effective assumption that there exists a cross-country production function in which institutional variables enter with a simple linear impact on performance. During periods when Germany and/or Japan were doing well relative to the US the virtues of patient finance and other institutional features were lauded; during the 1990s the US 'new economy' boom the virtues of flexible labour markets and market-based finance were widely lauded instead; however, it is unlikely that relatively short term performance could be explained in terms of enduring institutions. It is quite consistent with different approaches in this literature that societies will be able to evolve more-or-less efficient solutions to different institutional configurations rather than one arrangement (or a very limited number of them) being sustainable. Such differences though are highly likely to affect the fortunes of different groups; indeed, the emphasis of institutions as the outcome of political equilibria in the regulation approach acknowledges the importance of these effects. The impact of the financial system of capital accumulation is unclear: both bank and equity based systems have strengths and weaknesses in principle and overall the evidence on financial systems and performance is mixed and does not clearly indicate the superiority of any particular system for developed

economies (Allen & Gale, 2000; Beck & Levine, 2002). Particularly with increased international technology flows, the link between domestic institutions and productivity growth becomes weaker. Even with education, although there are different national arrangements of education systems, the evidence that differences in human capital accumulation explain variations in developed country growth rates is weak (Wolff, 2001; Coates, 2000, Ch. 5). Thus, considered either via the impact of specific institutions or as the whole ensemble, institutions do not appear to be primary determinants of economic performance. Given their impact on distribution this does not mean that they are unimportant. Following the key dimensions identified in Amable (2003), and broadly consistent with those identified in other key varieties of capitalism work, the next sections examine product market competition; wage-labour nexus; financial systems; social protection; and education and training systems.

4. STATE INTERVENTION

In much of the literature state intervention entails the setting the rules and framework for market activity and, as such, is necessary for the governance of markets. This is a useful corrective to the notion that even the market-led economies are, have been or even could be reduced to night watchman states and that deregulation processes are simply a case of removing regulations. On the contrary, for both the US and UK state support has played a key role in developing particular sectors (Gamble, 2004; Nelson, 2000). This argument has antecedents at least as far back as Polyani's emphasis that a pure market economy could not exist and must be embedded in non-market institutions. Nevertheless, as an insight it only gets us so far: recognizing the ubiquity of state intervention does not preclude examining changes in its level over time and differences between countries. Moreover, as Pryor (2005) notes, the diversity of capitalism cannot simply be read off from state intervention variables.

Amable (2003, Ch. 4) relies heavily on recent OECD indicators of restrictions on product market competition (Nicoletti, Scarpetta, & Boyland, 1999; cf. Nicoletti & Scarpetta, 2003). Cluster analysis of indicators of product market competition from Amable (2003, Ch. 4) does indicate patterns broadly consistent with expectations, although Ireland appears as closer to the market-based economies. Nevertheless this is an odd case of taking an orthodox economics approach largely at face value, indeed using measures from an organization with a key role in promoting market

liberalization; Amable (2003, p. 228) refers to the compatibility of European capitalism and moderate competition in product markets arguing that 'the completion of the single market is not a revolutionary change in this respect.' This is a judgement call. These snap shot measures provide little indication of trends over time; moreover, these measures are partly based on subjective assessments. Nicoletti and Scarpetta (2003) note that the evidence points to a general decline in product market restrictions but they claim that because of varying starting points and rates of reform differentiation amongst countries has increased. However, the nature of either the variable measures used in this analysis (including relative scoring by analysts) and the limited information available on the economic significance of each one means that such judgements cannot clearly be made. For example, the McKinsey Global Corporation in 1998 examined the productivity gap between the UK and major European economies (and the US) and concluded that 'the most pervasive explanation lies in the effect of regulations governing product markets and land use on competitive behaviour, investment and pricing.' The point is not to endorse their conclusions – far from it, their analysis is unpersuasive given the overall differences in regulations – but simply to note that the significance of regulation is hard to determine and thus to point to variations within a host of regulations does not demonstrate the continued diversity of regimes as such. The limited information available on wider groups of countries indicates that, possibly with the exception of the Southern European countries, product market restrictions amongst developed countries are low and the differences between them are relatively small. Recent OECD work has emphasized product market restrictions, in part as a proposed explanation for why widespread wage moderation over the 1990s has not led to the expected expansion in employment; the thrust of this approach has been to emphasize levels and differences in these regulations (OECD, 2001, Ch. 6; Estevão, 2005). It is often overlooked, or at least downplayed, that the EU countries are subject to stringent procompetitive rules through the Single European Market that enforce essentially the same regime throughout; the downplaying of this by the OECD and others can be seen as an attempt to account for why the actual gains from this project have failed to live up to expectations (Perraton, 2005a). That the SEM has failed to produce the income gains predicted for it should not be taken as indicating that international competition has not increased substantially within the EU when it may well simply reflect models that over-estimated the gains from liberalization.

Furthermore, the nature of the SEM regime does point to the emergence of a more market-based European capitalism. Broadly speaking the

negotiations over the formation of the SEM pitted a neo-liberal open markets vision against a 'fortress Europe' conception within which at least some EU-wide Keynesian and social protection structures could be constructed and in which post-war French policies of promoting national champions could be operated at the regional level; the neo-liberal vision clearly won out with lobbying by multinational corporations playing a key role in promoting the neo-liberal variant (Apeldoorn, 2002; McCann, 1995). These developments have key implications for the continental European capitalism group. Amable (2003, Ch. 5) points out that product market competition above some levels of intensity implies employment flexibility, or at least it would tend to increase the elasticity of demand for labour and thereby make employment more variable and increase wage inequality (cf. Rodrik, 1997). As discussed in the next section there is little direct evidence on the degree of magnitude of such effects but some evidence that they are already having a significant effect on labour.

A key qualification commonly offered to notions that widespread deregulation points to a generalized shift towards a more Anglo-Saxon capitalism is to argue that the processes differ between countries because they entail not simply removing restrictions but active *re*regulation, with important national variations in the new regulatory frameworks (cf. Vogel, 1996); Soskice (1999, p. 134), for example, argues that amongst CMEs 'organized business has sought not deregulation but reregulation in order to face up most effectively to global markets' in order to preserve domestic institutional arrangements that remain a source of competitive advantage. There are three main limitations of this line of argument. First, there is evidence of convergence in business regulation; Braithwaite and Drahos (2000) in their exhaustive study of business regulation find significant similarities between national regimes, attributing this in part to the emergence of an international epistemic community of business regulators leading to global regimes of regulation. As noted, within the EU large firms were lobbying for deregulation through an open borders SEM. Second, formal international integration, both regionally and globally through the WTO, reduces the scope for state intervention. The WTO effectively prohibits many of the instruments traditionally used for industrial policy and makes challenges to market restrictions easier; within Europe the SEM has produced a more Anglo-Saxon competition policy regime (Dumez & Jeunemaitre, 1996). Finally, it is one thing for states to design deregulation programmes in order to retain certain powers and in an attempt to secure particular outcomes, it is quite another for them to succeed.[5] The case of financial regulation shows that government regulation is frequently playing catch-up with

developments in the industry with regulations leading to outcomes not foreseen by the authorities. In European telecommunications and electricity deregulation, key examples in Vogel (1996), national institutional differences appear ultimately to have made little difference to the outcome of deregulation (Bartle, 2002; Serot, 2002).

In initial interpretations, particularly within the VoC approach, decisive deregulation was interpreted within a bifurcation framework: it was achievable within liberal market economies, and even then only amongst those with majoritarian political systems, in the face of interest group opposition (King & Wood, 1999). This is consistent with notions on path dependence in policy change but such a judgment no longer looks tenable. Across Europe governments undertook far-reaching privatization and deregulation programmes often, as in France and Spain, by left parties in coalition governments (Smith, 1998). Jospin's French Socialist government, for example, privatized more state-owned concerns than the previous six governments combined. The case of France is discussed in more detail below. The Southern European economies have seen a decisive shift away from their traditional post-war interventionist policy tools. This is not just on the left, but also amongst European Christian democracy so that Southern European governments of the right are pursuing more clearly *laissez-faire* policies than they did for much of the post-war period. State intervention in East Asian capitalism is examined in more detail below, but traditional tools of the developmental state as practiced in first Japan and later Korea and Taiwan in the post-war period have also been strongly undermined by these processes (Perraton, 2005b).

It is not simply that the shift away from state intervention represents a common move and one driven in large measure by global and regional integration; rather than leading to bifurcation or accentuated differences, this is largely a case of common trends. There remain differences between countries and these owe much to policy packages between countries, but these differences do appear to be diminishing. But, as Howard and King (2004) note, for the most part theorists within the institutionalist tradition often did not predict a shift towards *laissez-faire* policies or only amongst (some) Anglo-Saxon economies; on the contrary almost invariably the emphasis within earlier literature was on the limitations of markets for solving social problems leading to predictions of the *lessening* of the role of markets. Even studies of the key economies of the UK and US often claimed that there were inherent limits to market solutions within these economies and thus to the deregulation processes (e.g. Graham, 1997; Lazonick, 1991).

5. THE WAGE-LABOUR NEXUS

Wage-labour relations apparently present a clear case where integration does not lead to convergence; whereas liberal market economies are likely to see an increase in pressure for reducing the power of organized labour, by contrast in co-ordinated market economies employers' need for stability and co-operation at the enterprise level shores up their co-operative relations with the workforce, including unions (Thelen, 2001); if anything globalization is likely to increase the divergence between national capitalisms in this sphere. Marsden (1999) and Whitley (1999), amongst others, make industrial relations systems central to their analysis of different capitalisms and argue that globalization is unlikely to produce convergence in these. Marsden (1999), in particular, argues that norms governing relations within firms over managerial power and job boundaries can evolve through uncoordinated decision-making. However, norms will tend to persist once established and be common within national economies in line with institutionalist theory. Whitley (1999) and others situate employment relations within the wider context of national capitalisms, particularly systems of corporate governance and human capital formation, in line with the assumption of the interdependence of institutional arrangements in each national capitalism.

Amable (2003, Ch. 4) examines the wage-labour nexus in terms of employment protection legislation, industrial relations systems and wage bargaining arrangements. With employment protection legislation similar points apply as with product market regulations – evidence points to continued diversity but a general trend towards lighter regulation (OECD, 2004, Ch. 2); again the nature of the measures used does not readily allow assessment of scales and the extent to which these trends constitute convergence. More interesting is the evidence on industrial relations systems and wage bargaining arrangements.

Trade union density data provide some support for a bifurcation argument of the emergence of a low union density group of liberal market economies and high union density group of co-ordinated market economies (OECD, 2004, Ch. 3). The claim that where unions were initially strong that strength has been maintained largely holds for the Scandinavian countries, where the Ghent system of unions providing unemployment insurance operates; elsewhere union density has either shown no trend over the past 40 years or density has fallen. Even amongst Scandinavian countries there are signs that this may be facing decline with erosion of the Ghent system (Böckerman & Uusitalo, 2006). Although formal employee representation is hypothesized as one distinguishing feature of co-ordinated market

capitalism, mandatory systems of co-determination are essentially a German–Dutch–Austrian system. As Gill and Krieger (2000) show, although some form of formal employee workplace representation is common in Western Europe, the German Works Council system is hardly universal amongst these economies. Further, the proportion of German workplaces operating works councils is falling (Hassel, 1999). Overall formal involvement of employees in company boards is not universal amongst Continental European countries and has seen some decline even in those countries where it has been strongest.

Gordon (1996) made a bold attempt to test a version of the bifurcation argument, whilst accepting that a binary division was simplistic and left various countries in an ambiguous or intermediate classification. Distinguishing between 'cooperative' and 'conflictual' economies – the latter approximating to the Anglo-Saxon economies – depending on the intensity of workplace supervision arrangements and levels of trust, Gordon found evidence of bifurcation on proxies for supervision intensity which were significantly (and negatively) related to wage increase for production workers. *Ceteris paribus* more conflictual economies had more intense supervision leading to lower wage growth rates; Perraton and Clift (2004) found evidence for such trends continuing. More generally, though, the notion of a unitary national industrial relations system is hard to sustain. This is not to deny evident inter-country differences, but rather to question whether common norms within countries can clearly be discerned. Evidence is inherently problematic when it is typically collected through impressionistic surveys whose comparability across nations is questionable and may not be fully representative of national workforces. Evidence from a major survey of new work practices indicates few clear national patterns (OECD, 1999, Ch. 4). The prevalence of practices such as job rotation, team working and delegation to groups or individuals varies considerably between firms within a country and between countries. Overall, differences between national economies had limited explanatory power in accounting for the differences in the prevalence of these new work practices. Further, there are often considerable differences between countries with ostensibly similar industrial relations systems. Rather than integration strengthening particular systems as a source of competitive advantage, national systems are becoming more variegated with trends differing by company and industry as well as between countries (Katz, 2005; Katz & Darbishire, 2000; Marginson & Sisson, 2002). Attempting to produce generalizations about industrial relations systems in particular countries, let alone groups of countries that otherwise share key features, is perilous. The argument here is not that countries' industrial

relations are the same or that they are converging; there is evidence that different initial traditions do affect the nature of change (notably over the degree of union involvement in changing practices). The argument here instead is that it is increasingly difficult to maintain that there is a common, coherent system of industrial relations within each nation or economic group of nations. The limits of a bifurcation argument here are illustrated by the paradigm cases for the VoC approach, Germany and the US. The argument made here for Germany is that employers do not wish to dismantle the post-war industrial relations system and move towards Anglo-Saxon flexibility (Thelen, 2000). There is evidence of a post-war co-operative system of German industrial relations helping to introduce and initiate incremental innovation, with a danger that liberalization would undermine the virtuous circle this model created (Annesley, Pugh, & Tyrrall, 2004; cf. Allen et al., 2006). Undoubtedly, as Thelen shows, *some* German employers see the post-war industrial relations system as an enduring source of competitive advantage; others, though, emphatically do not and have used globalization – particularly the threat of shifting production overseas (notably to Eastern Europe) – to undermine union bargaining strength and to lobby for increased labour market flexibility (Raess, 2006). With the US, although the picture of low trust/low wage employment relations finds ready support this is far from the whole picture.[6] For some groups of workers US firms have used various mixed strategies between firms and for different groups of workers with attempts to induce co-operation through human resource management policies that by-pass unions (Katz & Darbishire, 2000); there is also evidence of their successful implementation – sometimes with union co-operation – in British firms (Guest, Michie, Conway, & Sheehan, 2003). The logic of theories of national labour relations systems is that such strategies would be hard to implement without being embedded in wider social relations that promoted workplace trust – Gordon (1996, Chs. 3, 6) explicitly argues this point – but the evidence here is more consistent with scepticism that national labour relations are usefully characterized in this way. Faced with new technologies and intensified international competition firms have adopted a variety of strategies which have led to fragmentation of national industrial relations systems.

National systems of wage bargaining may be distinguished from industrial relations systems. Since Calmfors and Driffill (1988) advanced the hypothesis of a hump-shaped relation between the degree of coordination of wage bargaining and inflation/unemployment performance, a large literature has developed exploring the theoretical and empirical basis of this analysis. This is central to most forms of varieties of capitalism analysis;

those in the VoC in particular insists on focusing on the degree of co-ordination rather than centralization in wage bargaining systems; whereas social democratic countries have been associated with centralized bargaining systems with national level bargaining between large scale union and employer organizations, amongst the meso-corporatist group although bargaining is more at the industry level there is in effect communication and co-ordination (of varying degrees of formality) between major bargainers. Effective co-ordination of bargaining in the meso-corporatist groups may thereby avoid the problem Calmfors and Driffill (1988) identified for intermediate level bargaining systems where organized insider groups are able to partially externalize the costs of inflationary wage claims and its effects on raising the Non-accelerating inflation rate of unemployment (NAIRU). Co-ordinated systems may also have certain other advantages: cohesive employer organization, particularly in the meso-corporatist group, can aid the provision of collective goods, particularly training systems and these arrangements may promote trust and thus help the industrial relations strategies noted above.

From the 1990s the apparent superiority of co-ordinated, or at least centralized, wage bargaining systems has diminished and several countries have shifted to more decentralized systems. Particularly with the worsening relative employment performance of social democratic economies in the 1990s, recent tests often find only weak evidence for the standard Calmfors-Driffill relationship and generally find relations between bargaining systems and macroeconomic outcomes are not robust (OECD, 2004, Ch. 3; Traxler, Blaschke, & Kittel, 2001, Ch. 6); this can be over-stated, Baker et al. (2005) found that co-ordinated wage bargaining systems continued to be associated with lower unemployment levels throughout the 1990s, although they caution that the implied effects from their regression analysis are implausibly large and are probably picking up other country-specific effects.

For all the emphases, particularly in the VoC literature, on coherence and coordination within national bargaining systems there appear to be only weak relationships between component parts of wage bargaining systems and particularly between degrees of employer and union organization (Traxler et al., 2001, p. 95); this suggests problems in the evolution in bargaining institutions and is also consistent with more general evidence cited above that institutional coherence is neither as common nor even important as VoC literature assets. Trends in bargaining systems present problems of interpretation with mixed trends (OECD, 2004, Ch. 3). Amongst the social democratic economies initially characterized by the most centralized bargaining systems, Sweden has seen a clear trend to decentralization from

previously highly centralized bargaining under pressure from employers to dismantle aspects of post-war employment relations and increase flexibility (Swenson & Pontusson, 2000); Denmark has seen a more negotiated move towards 'flexicurity' with more decentralized bargaining arrangements but still some inter-industry co-ordination. Relatively centralized and co-ordinated wage bargaining systems have been maintained in Finland and Norway, with considerable – if not universal – employer support (Bowman, 2002; Heikkila & Piekkola, 2005; Kahn, 1998).

At the decentralized LME pole the core countries – UK, US and Canada – have maintained strongly decentralized bargaining systems with relatively high degrees of wage flexibility; the lack of real wage growth for significant sections of the US workforce is well known and in the UK downward flexibility of *nominal* wages appears to be common (Smith, 2000). Australia and New Zealand have had a somewhat different evolution with previously relatively co-ordinated wage bargaining systems being strongly eroded in the 1990s.

Apart from the Anglo-Saxon countries, corporatist relations tended to develop rather than diminish over the 1990s amongst both those meso-corporatist countries where coordination between industry bargainers had been established and those of the poorly performing middle in the Calmfors-Driffill typology. Particularly in the latter group this appears surprising in view of theories of how and why corporatist relations emerge positing that they require historically embedded levels of trust and an ability of union hierarchies to deliver compliance at the local level. Without surveying all developments, particularly amongst continental European countries some common trends can be discerned (Perraton & Clift, 2004). The arrangements arose following a widespread perception of economic crisis within the country even if there was not a consensus over the appropriate reforms. The emergence of corporatist relations in these countries was in part a defensive measure, a view that bargaining with government over reform, as well as with employers, would be more effective than simple opposition. Unions typically abandoned any commitment to indexing wages to inflation and their opposition to expanding part-time work. This form of corporatism can therefore be seen as a response to neo-liberal policies as much as an alternative to them. In the Southern European countries particularly the role of political processes has been crucial: organized labour has attempted to trade cooperation in these areas for various concessions, particularly from governments of the left. How successful trade unions have been in extracting such concession is questionable. The Dutch and German cases are worthy of note here. The conclusion of the 1982 Wassenaar Agreement can be seen as

marking the end of a period in which the Netherlands displayed the characteristics of the negative consequences of uncoordinated bargaining, although earlier post-war Dutch relations were more consensual. Faced with a crisis of adjustment Dutch unions effectively negotiated wage flexibility to restore competitiveness and employment (Visser & Hamerijck, 1997). Whilst in broad terms this has been successful, much of the burden of adjustment fell on vulnerable groups who have experienced variable increases in employment and the restoration of profitability has not led to a commensurate rise in investment (Becker, 2001; Jones, 1999). In Germany there have been some attempts to decentralize wage bargaining (Ochel, 2005), again indicative of the desire of at least some employers to dismantle post-war arrangements; interestingly in the current decade actual German wage increases have tended to run *below* collectively agreed increases (Hein, Schulten, & Truger, 2006).

Globalization could act to undermine wage bargaining system in several ways. Increased elasticity of demand for labour from globalization would undermine labour's ability to extract production rents and tend to make wages more unequal (Rodrik, 1997). There have been limited attempts to test the significance of this in practice, with mixed results, but economic integration would be expected to generate convergence pressures on wages and there is evidence that this has already happened in the EU (Andersen, Haldrup, & Sørensen, 2000). There is a particular issue here with EMU which tends to undermine the basis for national organization of wage bargaining (Hall & Franzese, 1998). More generally by shifting power towards capital this may lessen employers' commitment to centralized bargaining system. This would be reinforced by higher capital mobility, which increases exit possibilities for capital and thus undermines attempts to bind business to national partnerships with other stakeholders.

The effects of these systems on wage inequality remain largely in line with prior expectations. Consistent evidence over time and across countries is patchy (OECD, 2004, p. 141), but evidence indicates that although there while has been some there has been some increase in Swedish wage inequality in general the social democratic economies still exhibit low wage inequality. Dutch and Irish wage inequality did increase from the 1980s to 1990s, as critics of its new corporatism have indicated. But in general wage distribution in the Anglo-Saxon economies remains clearly the most unequal, with trends towards greater inequality most clearly operating in this group. The UK and US deserve particular comment. The large rises in UK income equality were over the 1980s; these have largely stabilized since then but at 40 year highs with income increases being most pronounced over the

past decade in approximately the top and bottom 15 per cent groups (Goodman & Oldfield, 2004). Thus, new Labour policies to increase the minimum wage (and to direct welfare transfers to the poorest groups) have had some impact on inequality. Thompson (2004) points to the undermining of the post-New Deal settlement in explaining the growth of US inequality from the 1980s and how average and below average income households saw low rises in real incomes even during the 1990s US boom; Dew-Becker and Gordon (2005) explore this further: over 1966–2001 only the top 10 per cent of tax payers saw rises in real income equal to or above the economy's productivity growth rate – and this holds over the 1997–2001 boom period – so that inequality increased over this period despite a roughly constant labour share of income. This also raises questions over the conventional wisdom that rising inequality is essentially due to a combination of skill-biased technical change; in the US this appears to owe much to the richest group's increasing ability to appropriate rents and more generally the decline of trade unions and other institutional measures that tended to reduce such inequality.

The 1990s saw generalized wage moderation amongst OECD countries with consequently stable or declining wage shares. In general, there were no strong relationships between bargaining institutions and wage moderation over the 1990s (OECD, 2004, Ch. 3) – these various arrangements were all, to varying degrees, able to deliver wage flexibility in response to shocks. The employment response to this flexibility has varied, however. There is no clear relationship between wage moderation and employment levels (e.g. OECD, 2004, Ch. 3). Standard accounts invoke various auxiliary hypotheses, particularly the effects of product and labour market regulations, to explain these differences although evidence above provides grounds for scepticism over this (OECD, 2001, Ch. 6; Estevão, 2005).

Some attempt has recently been made to explain the decline of centralized bargaining in terms of trends in central bank behaviour and deindustrialization. Iversen (1999) attempts to explain reversals in the relative employment performance of economies with centralized wage bargaining systems. The key shifts in his analysis are central banks' policy stance of towards non-accommodation of inflation and changes in economic structure which in this analysis would reverse the Calmfors-Driffill (1988) results. Rational wage and price setters will incorporate the central bank's non-accommodating stance into their behaviour. Ignoring the completely flexible extreme,[7] initially higher levels of bargaining lead to superior outcomes through co-ordination effects but these now peak at intermediate bargaining levels where labour would not rationally push for inflationary wage increases because of

non-accommodation. However, at very high levels of labour organization, if unions use their power to pursue wage bargaining in support of equality objectives this is likely to lead to wage inflation pressures. This will particularly be the case if there is wage drift amongst the most productive workers which is anticipated and incorporated into wage claims by low productivity workers; similar arguments are also made in some recent OECD literature (OECD, 2004, Ch. 3). Further, such wage bargaining provides incentives for the most skilled workers to defect from co-ordinated arrangements to the extent that such arrangements hold back their wage rises by reducing firms' discretion to offer higher wages. Both employers and skilled employees therefore have a common interest in undermining centralized bargaining systems. Thus, this analysis appears to explain both the worsening of social democratic countries' unemployment record in the 1990s and the shifts away from centralized wage bargaining in these countries. Iversen (1999) offers a coherent account of why social democratic economies have become less successful at delivering low unemployment together with an explanation for shifts away from centralized bargaining systems. Non-accommodation would be expected to leader to lower inflation and unemployment with less variation across economies, as we have observed amongst virtually all developed economies in the 1990s. Iversen (1999) predicts that egalitarian wage bargaining will now have a greater adverse impact on employment since it will inhibit the growth of relatively low productivity private services jobs, with evidence that limits to increasing employment through public sector service job creation have been reached and that lower wage differentials are associated with lower private sector service employment and lower employment growth in the 1990s. Thus, Iversen (1999) argues that economies have changed sufficiently that unions must accept greater inequality in the 1990s than the 1980s if they are to achieve high employment objectives. Iversen (1999, Ch. 6) points to Germany as an alternative to the social democratic model with lower egalitarian objectives but largely maintaining wage bargaining systems so that unions and social democratic parties would be able to achieve their employment objectives without necessitating a shift to Anglo-Saxon style labour markets or a significant shrinkage of the welfare state.

Whilst this analysis represents a detailed attempt to explain changes in the performance of co-ordinated economies, it turns on several key assumptions. Varghese (2001) criticizes this and similar studies for their exclusive on supply side explanations of unemployment and their neglect of the capital side of these relationships in terms of the investment response. Kenworthy (2003) found that although there was some evidence of a negative impact of

egalitarian wage policies on employment growth it was relatively small. We noted above the absence of a clear relationship between wage moderation and unemployment; Baker et al. (2005) review key studies of the determinants of unemployment levels amongst OECD countries, finding that results for the conventional supply side explanatory factors are not robust and do not support the strong policy conclusions drawn from them. This is particularly important amongst the social democratic economies; in both Finland and Sweden the financial boom following 1980s deregulation collapsed into a banking crisis, with the amplitude of the financial boom and crash aggravated by the effects of the hard currency policy pursued at the time. Both countries are estimated to have experienced greater proportional output losses than either suffered during the Great Depression. Vartiainen (2004) carefully evaluates analysis of unemployment trends amongst the Scandinavian countries in the 1990s and finds no clear evidence of rising equilibrium unemployment rates as well as evidence for the importance of demand side factors in explaining their unemployment levels over time (cf. Holden & Nymoen, 2002; Nymoen & Rødseth, 2003). Although the Danish 'flexicurity' model is often favourably contrasted favourably with Swedish case, Ploughamann and Madsen (2005) show that their employment performances are similar.[8] As Glyn (2001) points out, the contrast between the supposed greater ability of the US and similar economies to generate employment amongst the least skilled due to wage flexibility at the bottom end is overstated. Employment rates and unemployment rates for the least educated group in social democratic economies are comparable with or better than the OECD average. Since the mid-1990s these economies have seen comparable growth in private sector service employment to that experienced of the US and UK. Aggregate demand issues are important more generally; the German case is important both intrinsically and through its effects on European economic activity; Hein et al. (2006) find that wage moderation in Germany has limited the aggregate demand growth that is only partially offset by external activity and any investment response.

The investment response is central here, particularly for the social democratic group. Corporatist bargaining in response to earlier shocks was successful, at least according to its proponents, because unions were prepared to accept wage moderation in return for an expectation that this would result in higher investment and thence higher income and employment. The co-ordinated wage bargaining systems in these countries were not, from the point of view of labour at least, simply designed to achieve high levels of employment wage restraint – decentralized wage flexibility in principle can achieve that. Nor is it simply a device to ensure wage restraint

and adjustment without major increases in wage inequality. For organized labour corporatist strategies in particular the aim here was to achieve full employment through high-productivity–high-wage employment in the tradables sector (e.g. Landesmann & Vartiainen, 1992). As Varghese (2001, p. 720) argues re Iversen and others: 'What mars … and what also distinguishes them from earlier treatments of social democracy is their complete silence on how the supply and content of private capital and investment can be channelled in such a way as to further an egalitarian project.' By contrast earlier analyses of corporatism stressed its ability to achieve negotiated adjustment preventing a profits squeeze and thereby preserving employment and investment over the medium term (Henley & Tsakalotos, 1991; Landesmann & Vartiainen, 1992). Accounts such as Iversen's downplay this by accepting the mainstream macroeconomics assumption that levels of unemployment are invariant to investment. Acceptance of a mainstream macroeconomics framework thus leads to a neglect of capital accumulation. Earlier contributions to the literature on corporatism recognized that the post-war success of European small open economies rested on high rates of investment, particularly in tradable industries; if labour can credibly pre-commit to wage moderation then higher levels of investment and thus income can be achieved. In some models this is essentially an investment co-ordination problem; in others though it has the character of a non-cooperative game where both sides have incentives to defect and so the socially optimal solution cannot be assumed to arise for repeated bargaining. A co-operative solution would thus require organized labour to accept greater wage moderation than they would otherwise choose in return for capital delivering higher levels of investment relative to profits than capitalists would otherwise choose; even in the absence of organized labour there are several standard grounds for expecting private capital accumulation to be socially sub-optimal. Landesmann and Vartiainen (1992, p. 234) note that for the 1960–1985 period 'these [social democratic] economies seem to be able to maintain comparable or even higher investment activity compared to other OECD economies while showing significantly lower rates of return or profit shares in national income.' Other conditions, particularly through economic policy, may buttress this and help maintain investment levels. Side payments by the state to induce co-operation may be made to labour in the form of provision of a social wage and to capital in the form of support for investment and other industrial policy measures. Since the 1980s although profit rates have largely recovered investment efforts have not; this is important not just for the generation of high incomes but – if standard economic modelling assumptions are relaxed – for total employment levels.

The impact changes in financial arrangements may have had on accumulation and employment are considered below.

To recap, increased wage flexibility has been common to developed countries with increased pressure on wage costs. Where union density was high this has typically remained so, but unions' ability to bargain with the state over social goods and political goals has, in general, declined. Although union power has tended to diminish in the Anglo-Saxon countries, where unions had medium strength corporatist relations have tended to emerge despite the absence of conditions typically thought conducive to this. Unions were powerful enough for employers and governments to seek accommodation with them, but this also had advantages in terms of delivering cooperation. Overall whilst there clearly are differences between employment practices and wage bargaining systems, it is far from clear that these constitute a coherent national ensemble of relations with developed countries.

6. FINANCIAL SYSTEMS

Differences in financial systems are invariably central to the national capitalisms literature. The financial system is not only key to channelling funds for investment; the patterns of ownership and control of firms – corporate governance – are seen as determining social outcomes. Systems of corporate governance not predicated upon maximizing shareholder value are said to permit 'voice' to other stakeholders. Authors in this debate often claimed the benefits of 'patient' finance in Continental European and East Asian systems, with banks' close ties to creditor firms, over the 'arms-length' Anglo-Saxon models (e.g. Grabel, 1997; Nell & Smith, 2003). The 'voice' character of bank-based systems permits the development of long term relations with other stakeholders, particularly training workers, credible commitment to investment in return for wage restraint and not resorting to hire-and-fire policies over the business cycle. Whilst this was hypothesized in particular to secure investment in firm-specific human capital and commitment to this, within the VoC view this leads to patterns of specialization with bank-based systems having relative advantage in industries characterized by incremental innovation whereas capital market-based systems have a relative advantage in industries characterized by radical change where firm-specific human capital investments are likely to be less important. Recent crises among European and Japanese banks, and the alleged failure of these systems to support new firms, have led to praise for the Anglo-Saxon

system; in particular, for the ability of capital market-based systems to mobilize funds for the 'new economy' industries in the US and elsewhere during the 1990s (Houben & Kakes, 2002). Moreover, trends towards financial globalization are often believed to undermine the basis for alternative systems to Anglo-Saxon finance. Although we may not necessarily expect convergence on efficiency grounds, financial globalization might be expected to lead to convergence towards the capital market system. Financial globalization has the increased possibilities for large firms at least to raise funds on international capital markets as global financial markets have grown exponentially since the 1970s and cross-border barriers have been liberalized (Held et al., 1999, Ch. 4).

The VoC analysis of a bifurcation between capital market and bank-based systems is largely a comparison between Anglo-Saxon financial systems and the German and Japanese financial systems. Other perspectives recognize variations within this (Amable, 2003; Boyer, 2005); whilst meso-corporatist economies typically exhibited close governance arrangements between firms and their major bank lenders, such governance relations were weaker elsewhere in continental Europe where typically the prevalence of concentrated family-based ownership, pyramid structures or cross-ownership patterns limit both any market for corporate control or effective bank-based governance (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1999). Generalizations again are perilous here: outside of East Asia, in developed economies companies' predominant source of finance is retained profits and even in those countries characterized as having capital market-based systems typically only a small minority of funds are raised by security issues.

The clearest transformations can be seen in the Southern European group that have shifted from state-owned bank ownership patterns directing finance according to industrial policy to privatization of these banks. State-owned banking was also prevalent in the East Asian economies of Korea and Taiwan; the working out of post-crisis reforms in Korea, with some attempts to create an Anglo-Saxon financial system, remains incomplete (Haggard, Lim, & Kim, 2003). Amongst the Southern European group there was no common pattern to the outcome of this liberalization process. The French experience is notable for a rapid transition from a bank-based financial system with state direction of credit. Since the 1980s liberalization and opening of financial markets have transformed the French financial system towards a market-based system as a deliberate act of government design. Bank loans have become proportionately less important and internal finance and other instruments more important in firms' finance since liberalization with a clear trend towards disintermediated forms of finance to

the extent that the relative proportions now resemble those of Anglo-Saxon economies (Schaberg, 1999; Schmidt, Hackethal, & Tyrell, 1999). Whilst there has been a general decline in loans as a proportion of firms' liabilities across the G7 countries this has been particularly marked in France with a sustained rise in equity as a proportion of corporate liabilities (Byrne & Davis, 2003, Ch. 4). Of particular interest here is the degree of international financial integration. Foreign sector equity assets and liabilities have risen from less than 10 per cent relative to GDP in 1980 to around 80 per cent today (Byrne & Davis, 2003, Ch. 7). The behavioural implications of these trends are harder to determine. Ownership of the largest companies was typically highly concentrated with dense inter-locking corporate networks through inter-locking share ownership networks around major banks and inter-connected directorships amongst the cohesive French business elite (Morin, 2000; Windolf, 2002, Ch. 4). The privatizations of the 1980s and 1990s saw attempts keep major concerns remain within the *noyaux durs*, hardcore networks of inter-linked industrial and financial interests and thereby limit the emergence of any effective market for corporate control. Nevertheless, there is evidence that these networks are partially unravelling with both the entry of foreign investors and the development of international networks by French companies. Whilst the degree of short-termism amongst foreign investors may have been exaggerated, rising equity ownership has still led to greater orientation towards shareholder value amongst publicly quoted French companies (Morin, 2000; Clift, 2004).

Elsewhere in Southern Europe transformations have been less dramatic with continued concentrated ownership and limited markets for corporate control so that neither a capital market based system or a meso-corporatist bank-based system of governance is clearly emerging (Deeg & Perez, 2000; Rajan & Zingales, 2003b). Even here, though, levels of stock market capitalization have risen sharply (Rajan & Zingales, 2003a). In general, evidence for EU countries shows no evidence of convergence in the use of bank loans for investment funds but some evidence of a shift towards use of funds that is more characteristic of an Anglo-Saxon system (Murinde, Agung, Mullin, & Mullineux, 1999; Rajan & Zingales, 2003b). Relative to the 1980s differences in sources of funds, financial market activity and regulations have narrowed between continental Europe and the US/UK systems. The social democratic economies had been characterized as having bank-based systems with significant state direction of credit towards social goals and 'no sophistication of financial services' (Amable, 2003, p. 88). Since then these economies have seen a thorough-going programme of financial liberalization. Facing regimes of social democratic government and powerful labour

movements, strong ownership groups had developed (Agnblad et al., 2001). Ownership concentration appears to have been more the result of disadvantageous tax regimes than lack of legal protection and share market capitalization has risen rapidly since liberalization despite limited changes in legal protection (Agnblad et al., 2001; Henrekson & Jakobsson, 2003). These new financial markets have been central to the success of Finnish and Swedish IT firms outside of traditional bank relations. As a result of liberalization stock market capitalization has risen sharply and share ownership is now less concentrated than in continental European countries. Further, strong capital inflows have led to increased foreign ownership, which is now over 40 per cent for Swedish shares (Henrekson & Jakobsson, 2003; Reiter, 2003) and around 70 per cent in Finland where the leading bank is foreign-owned. Thus foreigners have large and increasing stakes in Swedish companies that are also multinational in their operations; this likely to weaken the ability of other actors to tie firms into the social relations characteristic of post-war social democratic economies.

Transformations in the key meso-corporatist economies of Germany and Japan have proceeded differently. The German case is frequently cited as an example of financial liberalization not leading to systemic change (e.g. Deeg & Perez, 2000); in these interpretations although there has been some shift towards a greater emphasis on maximizing shareholder value, a decline in the governance role of banks and greater use of international finance amongst large German firms (Beyer & Hassel, 2002; Schmidt, 2004), this is not necessarily at the expense of internal firm relations. Lane (2003) provides counter-evidence to this, arguing that it is difficult to see how a hybridized system operating on different logics could function and persist; instead German companies' increased focus on shareholder value is leading to an erosion of post-war labour relations. Others note that although the cautious financial liberalization in Germany appears to have preserved feature of the post-war system, the functioning of the new system may be unstable and could yet to see a more decisive shift towards Anglo-Saxon patterns (Schmidt, 2004).

The collapse of the 1990s bubble economy has led to a transformation in the Japanese financial system with a decline in bank borrowing by larger firms so that their financing patterns now resemble those of firms in Anglo-Saxon countries (Nabeshima, 2000). Although for many Japanese firms the main bank continued to play a key governance role, during the 1980s the nature of the governance relationship operated in ways that differed significantly from that claimed for the Japanese main bank system. Although, the theory of the Japanese main bank system predicts the main bank tends

to increase its exposure to firms with falling profits, the reverse happened in the 1990s (Matsuura, Pollitt, Takada, & Tanaka, 2003). Whereas earlier studies had attempted to test whether main bank relationships increased investment, even after controlling for other factors, Japanese firms whose debt had a higher fraction of bank loans in 1989 performed worse and invested less in the 1990s than other firms did (Kang & Stulz, 2000); close firm-bank ties tended to raise the cost of capital, so that most of the benefits from these relationships were appropriated by the banks (Weinstein & Yafeh, 1998). Thus, overall relationships between major Japanese firms and their main banks have declined and the banks have been unable to maintain the relations (said to be) characteristic of the earlier post-war period.

These shifts towards financial liberalization has affected income distribution with the rise of rentier income as a share of national income, defined as the profits of financial firms plus interest income accruing to non-financial, non-government residents (Epstein & Jayadev, 2005). Although only limited data is available, the largest increases appear to have occurred in the Anglo-Saxon economies of Australia, the UK and US although Belgium and the Netherlands also saw relatively large rises. This financialization may have had macroeconomic consequences by raising required rates of return on capital investment and providing alternative opportunities for funds it appears to be significantly related to lower rates of investment and from this lower employment growth amongst leading OECD economies (Schaberg, 1999; Stockhammer, 2004).

The character of Anglo-Saxon financial systems is often simply assumed, but rather than being a long run embedded institutional feature of Anglo-Saxon economies, shareholder activism appears in part to be a result of 1980s liberalization. Holmstrom and Kaplan (2001) show that US shareholder activism as a key element of corporate governance and the consequent pressures to maximize shareholder value only really emerged in the 1980s. Before that, shareholder activism has been relatively rare in the post-war period. There are similarities with the position in the UK where dispersed, and often passive, investors often gave rise to the textbook problem of insufficient monitoring (Goergen & Renneboog, 2001). Whilst hostile takeovers and leveraged buyouts were common in the 1980s, their decline in the 1990s may reflect the general shift towards firms maximizing shareholder value.

Overall, financial liberalization and integration has led to significant changes in the national financial systems. Whilst this falls short of full convergence onto a presumed Anglo-Saxon norm – which itself is a relatively recent arrangement – the differences have narrowed. Coffee (2002)

distinguishes between formal and functional convergence here. Although formal rules of corporate governance may not converge, firms can increasingly access foreign financial markets and new classes of investors. The rise in stock market capitalization, Coffee (2002) argues, undermines both the legal investor protection arguments of La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) and the political regime approach (e.g. Roe, 2002) since capitalization has risen despite limited changes in either legal or political regimes. The cases of the Scandinavian countries and France bear out the Coffee (2002) argument that once embedded systems can change rapidly through financial integration even without major legal or political changes. In general, debates over corporate governance mechanisms may be partially misconceived; as Allen and Gale (2000) point out, the evidence for the mechanisms from either capital market or bank-based systems operating in the ways theorized is weak. To pick one example, recent corporate scandals in the US, following the collapse of the dotcom share boom weaken the claims of La Porta et al. (2000) for the superiority of Anglo-Saxon common law systems. These scandals appear to display precisely the phenomena La Porta et al. claim is characteristic of other legal systems: expropriation of assets by insiders at the expense of minority shareholders (and other stakeholders), market manipulation and limited transparency and inadequate reporting so that minority shareholders were provided with misleading information. More generally, firms largely continue operate profitably across different systems but in ways that are not simply related to presumed financial system norms.

In some interpretations functional convergence in response to financial liberalization can stop short of systemic convergence – legal changes and a greater focus on shareholder value remain compatible with arrangements other than capital-market based systems. Lane (2003) argues that such hybrid arrangements are inherently unstable in that they entail different logics operating in different parts of an institutional system, in contrast to principles of institutional coherence. Allen and Gale (2000) point out that banks as financial intermediaries provide smoothing of returns over time and thus reduce risk to investors; however, competition from financial markets means that investors would have to accept lower returns in some periods to smooth returns over time. Financial markets may then grow relative to intermediaries even where it may be socially optimal to retain the insurance function provided by the latter. Grahl (2001) argues that it is not simply the rise in cross-border flows and convergence in returns on financial assets – important as these are – it is that access to international markets for borrowers and savers increasingly set the terms for both savers and borrowers.

The depth and breadth of international financial markets makes them attractive to both savers and borrowers, particularly as it tends to raise returns to the former whilst offering keener terms to the latter. The effective processes of cross-subsidization that often operated within bank-based systems – between firms and from savers to borrowers – are undermined by financial globalization. Globalization can undermine these relations in other ways. Product market integration through trade will tend to increase the pressure on companies to maximize profits. This will act to reduce rents available to insiders, particularly labour. Boyer (2000) views pressures for profit equalization through financial integration in the context of heightened product market competition as potentially undermining the basis of institutional diversity and leading to convergence towards a finance-led regime.

7. SOCIAL PROTECTION AND EDUCATION

There have been numerous studies of transitions in national welfare states and space precludes a detailed analysis. Consensus analysis in the literature focuses on explaining the ways in which different institutional arrangements have led to varying responses to the challenges for social welfare provision from ageing populations and (frequently) persistent economic inactivity amongst working age people (e.g. Scharpf & Schmidt, 2000). Government expenditures appear to have stabilized as shares of national income (at different rates) and this may reflect national social equilibria in terms of relative demands for social goods and their costs of supply (Vartiainen, 2004).

Rather than exploring changes in welfare systems in detail, the purpose of this section is to point to certain common trends that analysis of differentiation between systems tends to downplay. Any equilibrium may be fragile as governments face trying to balance growth in demand for public services with increased difficulties in raising tax revenues. In Europe at least the welfare state continues to command widespread legitimacy and the European public largely continues to demand its services notwithstanding attempts by various commentators to insist it needs shrinking in the interests of efficiency (Boeri, Börsch-Supar, & Tabellini, 2001). Nevertheless, the expansion of the welfare state appears to have come to an end and in the Scandinavian economies processes of decommodification (at least as interpreted by Glyn, 1992) have reached their limits (Perraton & Clift, 2004).

Whilst globalization may increase demand for welfare services by exposing citizens to greater risks it may also reduce governments' ability to sustain

levels of provision. There is evidence that globalization has reduced effective corporate tax rates (including amongst the Scandinavian countries) and reduced cross-country variance amongst developed economies and shifted the burden towards labour and indirect taxation (Bretschger & Hettich, 2002; Gropp & Kostial, 2000). In part governments have responded by broadening the corporate tax base but cutting rates on the most mobile capital (Devereux, Griffith, & Klemm, 2002; Ganghof, 2000). One common response is to downplay the significance of this since corporate tax only ever raised a minority of total revenues. Nevertheless, to the extent that globalization constrains governments' ability to raise revenues to levels they desire this has restricted their ability to cut income taxes where they harmed employment and shifted them towards less mobile factors (Genschel, 2002). In particular, the shift towards greater use of indirect taxes makes the financing of the welfare state regressive to varying degrees across countries (Kato, 2003). Although downward pressure on corporate tax rates has not led to a race to the bottom as such, it remains a key constraint on expanding welfare provision in line with rising demand. It is not simply that the tax burden has shifted towards labour and indirect taxation; globalization would be expected to raise the elasticity of demand for labour so that the incidence of taxes (the real economic burden) would increasingly fall on labour and this would worsen the adverse employment impact of taxation (Rodrik, 1997). Although Rodrik (1997) found that across countries more open developed economies have larger welfare states, he also found that over time increased openness was associated with lower expenditure. These notions are given further support by Skidmore, Toya, and Merriman (2004) who find evidence of convergence – robust to the inclusion of various control variables – for government expenditure per capita both globally and within the OECD countries. Although they explain this in terms of a new growth theory convergence model rather than a globalization hypothesis, evidence on openness proxies is also consistent with this explanation. Similarly Sanz and Velázquez (2006) found evidence that European economic integration is leading to some convergence in the composition of government expenditures.

Table 1 shows that once net social expenditures are considered (allowing for the taxability of certain benefits in some countries) the differences amongst developed economies are considerably smaller with the differences between the Scandinavian economies and the rest becoming less pronounced. The rankings, though, remain broadly similar.

The fiscal pressures may have led to some qualitative convergence between welfare states. The diffusion of new public management techniques

Table 1. Gross and Net Public Social Expenditures.

	Public Social Expenditures as a Percentage of GDP			
	1997 Gross	1997 Net	2001 Gross	2001 Net
Australia	17.4	16.6	18.0	21.1
Austria	25.4	20.9	26.0	21.8
Belgium	27.2	23.5	24.7	23.2
Canada	17.9	16.2	17.8	20.3
Denmark	30.7	22.9	29.2	22.5
Finland	28.7	21.4	24.8	20.0
France	–	–	28.5	27.0
Germany	26.4	24.6	27.4	27.6
Ireland	17.6	15.4	13.8	12.5
Italy	26.4	21.6	24.4	21.9
Japan	14.2	13.9	16.9	20.2
Netherlands	24.2	18.2	21.4	22.1
New Zealand	20.7	17.0	18.5	15.9
Norway	26.1	21.1	23.9	20.9
Spain	–	–	19.6	17.0
Sweden	31.8	25.4	29.8	26.0
United Kingdom	21.2	19.2	21.8	23.3
United States	14.7	15.3	14.7	23.1
Mean	23.1	19.6	22.3	21.5
Variation	24.1	18.4	22.3	17.4

Sources: Adema (2001) and Adema and Ladaique (2005).

has led to some similarities in strategies. Schwartz (1994) found that in Denmark, Sweden, Australia and New Zealand countries reorganization within the state – particularly of welfare state provision – saw operational responsibility increasingly devolved to local levels whilst control over spending became increasingly centralized and strict. Increased use of markets and quasi-markets for provision of welfare services meant that local level managers had more devolved power, mirroring developments in private corporations. Competition and comparisons ('benchmarking') was encouraged between agencies and sometimes with private sector providers. These processes have the effect of diffusing pressures on the welfare state by limiting the power of interest groups whilst strengthening the power of fiscal bureaucrats.

Within the welfare state the education system has assumed greater importance in the context of general focus on human capital strategies and specific focus on increasing employability amongst groups of working age. Characterizations of a shift from a 'welfare' to 'workfare' state are of limited

use in explaining changes or differences between countries. Boix (1998) argues that human capital policies are the key contemporary tool of social democracy economic policy: state promotion of human capital accumulation entails recognition of a key market failure and this sets them apart from neo-liberal policies. Moreover, suitably broad-based human capital policies can help achieve social democratic objectives by enhancing employability and income potential across the population. Boix argues that instead of observing policy convergence, globalization has led to a bifurcation between conservative and social democratic policies. Whereas, he argues, conservative governments simply attempt to create a climate that encourages private investment, social democratic governments use public policy to correct for market failures in human capital formations. Combining relatively orthodox stability-oriented macroeconomic policies with raising the productivity of both capital and labour allows growth with equity. This helps to alleviate (but does not eliminate) trade-offs between inequality and employment, over the medium term at least. In testing he finds governments of the left tend to spend more on such policies than those of the right.

This account is surely overdrawn. The sharp distinction between conservative and social democratic governments is hard to sustain: few but the most ardent neo-liberals deny the case for intervention to support human capital accumulation which in practice is undertaken by all governments.[9] The UK example points to the ambiguities of this with centralization of government expenditure and policy, combined with attempts to increase business involvement in provision of post-compulsory education (Crouch, Finegold, & Sako, 1999, Ch. 4).[10] Evidence on education expenditure indicates small differences between developed economies (OECD, 2006); ironically, although Britain was a key example in Boix (1998), education expenditure did not rise as a proportion of GDP under the first new Labour government. Moreover, although social democratic countries do tend to spend more there have been concerns over the effectiveness, especially in Denmark and Sweden. Certainly social democratic states have been concerned to pursue egalitarianism within the education system and have succeeded in achieving employment rates amongst the lowest educated groups comparable to or better than the developed country average. More widely, there are clear patterns of difference between country groups and their education and training systems which globalization processes have done little to erode (Crouch et al., 1999; Brown et al., 2001). Moreover, this gives rise to different patterns of industrial and trade specialization broadly as expected.

However, the functionality of these education and training systems in response to changing economic conditions is worthy of further investigation. Ashton and Green (1996) point out that effective national education and training strategies require commitment not just from public education authorities but also from business to invest in capital embodying technology that utilizes skilled labour effectively and implement appropriate work practices. For all the attention on increased demand for skills from technological change and/or globalization, recent studies indicate significant levels of over-education in terms of educated workers (particularly graduates) working in occupations for which they are ostensibly over-qualified (Büchel, de Grip, & Mertens, 2003). This may in part reflect the general presumption that education and training systems need to provide high-skilled labour for competitive export production, whereas this is only ever likely to employ a minority of the workforce (cf. Crouch et al., 1999, Ch. 8). Differences in definitions and data limit systematic comparison between countries but do indicate that this phenomenon is widespread across different education and training systems. The US system, for which most data is available, is interesting here; data on income inequality trends noted above already raises doubts that these can be explained by standard trends. Pryor and Schaffer (1999) found that the rising graduate wage premium was partly due to booming demand for high-quality graduates in high-tech sectors, but it also reflected rising wages in graduate sectors where rising demand met controlled supply (such as lawyers and private health care workers); many other graduates were effectively displacing high school graduates from occupations they had previously dominated so that the latter's relative position worsened with respect to both college graduates and also high school drop-outs.

Whilst governments continue to spend significantly different proportions of income on welfare states organized on different lines, the common pressures that they face is inducing similar responses in some respects. The role of education as a functional element of the system in this may have been overstated as more evidence comes to light of over-education and mismatch of labour supply.

8. WHERE ARE DIFFERENT CAPITALISMS NOW?

As emphasized above, it is not simply the key components of different capitalist systems but their interaction. This section draws together material to examine how far the ensemble of relations identified for the main types of

developed capitalism have persisted. As this focuses on particular countries as exemplars of each type it is inevitably somewhat selective.

8.1. Anglo-Saxon Economies

Relatively, little work has focused on the evolution of Anglo-Saxon economies' institutional structures. In some arguments Anglo-Saxon economies' key institutional features are likely to be accentuated by globalization; arguments instead centre on whether the same is likely to be true for other groups. In other variants, the limits of market-based organization of social activity, particularly in terms of the provision of skilled labour and long-term finance, will become more pressing over time. Much of the account of this is based upon the 1990s 'new economy' growth around new information and communication technologies in the US. Whilst this appears to exemplify the strengths of market-based capitalism – the ability of capital markets to fund new technologies and emergent firms, the supply of high-level graduate labour the ability of workers to shift jobs and industries – the contribution of the new economy to 1990s US growth has been heavily debated. Thompson (2004) assesses the evidence and shows that the contribution of new economy industries to 1990s US growth was strongly sector-specific with US performance being driven by a range of macro factors. Moreover, the collapse of the dotcom boom and associated financial scandals raise questions over both the sustainability of the new technology boom and the appropriateness of the financial system. Whilst UK economic performance since the mid-1990s has been relatively strong, productivity levels remain behind the world frontier.

More broadly, the degree of functionality of the Anglo-Saxon system may be over-stated. At least as an ideal type, labour market flexibility in the context of general work skills enables relatively low cost adjustment in labour markets at least in part through the mobility of workers between firms; the financial system supports the emergence of new firms and industries. To the extent that labour market flexibility ensures low unemployment then this contributes to maintaining low government expenditure and taxation (e.g. Amable, 2003; Boyer, 2005). Nevertheless, firm-specific skills are hardly unimportant in Anglo-Saxon economies; Thompson (2004) shows that US workers who lose their jobs in particular suffered significant losses in real wages as and when they found other jobs pointing to the importance firm-specific skills (cf. Farber, 1997). Although Anglo-Saxon economies have been able to generate relatively high levels of employment this still disguises

groups of low activity rates, particularly amongst vulnerable groups and a deep regional problem in the UK.

Despite the inequality and limited real income gains for average and poorer households, there is little indication of fundamental institutional change in US capitalism. In general, institutional features of these economies have strengthened: financial markets have become more active, markets – especially labour markets – have become more deregulated. Pryor (2002) shows that the key institutional features of US capitalism have strengthened and are likely to persist; the political coalitions that introduced the New Deal and partially sustained it in the post-war until the 1980s are unlikely to operate, although government expenditure may well trend upwards due to an ageing population. Elsewhere the picture is a little more complex. Whilst the British case does not indicate radical change since the 1980s policies undertaken over the past decade have led to some restructuring of labour markets. Moreover, the troubled relationship of the British political economy with the EU places some limits on the market-based system, particularly in labour markets, and means that economic activity and decision-making takes place in part within a different institutional context (Gamble, 2002, 2004). As Amable (2003, Ch. 6) notes, attempts by new Labour to shift EU policies in a markedly more neo-liberal direction ended in failure although so too did concerted attempts to construct a social Europe within the EU economic space. Elsewhere even if the majoritarian system enabled New Zealand to pursue more through-going liberalization than Australia there is scant evidence it gained from this; Dalziel (2002) shows that the New Zealand liberalization programme led to a worse economic performance than Australia. Overall, globalization trends have largely operated to reinforce the institutional features of Anglo-Saxon capitalism.

8.2. Continental European Capitalism

Here the French case offers one of the most intriguing cases of institutional change. For much of the post-war period at least the key defining feature of French capitalism has been its *etatiste* character: the centrality of the state to organizing state-led industrialization, mobilizing finance and providing an extensive legal framework for the conduct of industrial relations. The interpenetration of the state and business elites acted to reinforce the coherence of this model. Since the abandonment of Mitterand's radical policy programme in the early 1980s, key aspects of the post-war state-centred system have been dismantled, often under governments of the left, although

France still has the largest share of government expenditure in GDP of industrialized countries outside of Scandinavia. Recently France has often been viewed in unfavourable terms, with particular attention focussed on high unemployment rates since the 1980s and the limited impact of 'new economy' technologies in the 1990s. It is charged with operating out-dated policies that inhibit job creation and the up-take of new technology or, in more nuanced accounts, having only achieved partial liberalization sometimes with unexpected (even perverse) effects. Whilst the French economy has achieved productivity levels and growth rates comparable with leading economies (Metz, Riley, & Weale, 2004), levels of investment in and productivity growth from new technologies remain relatively low.

Since the mid-1980s, the role of the state within French political economy has been transformed. Internal pressures for liberalization and the effects of regional and global integration have undermined the policy tools of post-war intervention, not least directed credit; much of this effectively received cross-party support. The financial liberalization, discussed above, transformed the financial system towards a strikingly Anglo-Saxon character and eventually led to the unravelling of corporate networks. This is in the context of increased international integration of the French economy (Held et al., 1999, esp. Chs. 3–5): cross border capital flows have grown rapidly and both inward investment in France and outward investment by French companies have risen sharply as French multinationals are increasingly establishing international production networks but foreign ownership of French companies is also rising (Morin, 2000). From the 1970s, France saw rising trade and international investment flows as French industry became increasingly exposed to external competition and increasingly oriented towards European markets away from the more sheltered markets of former colonies. Growing integration and multinationalization of French industry has undermined the traditional promotion of the French national innovation system (Mustar & Laredo, 2002). As firms grew less dependent upon the state they forged new relationships with (in particular) their workforce and financiers; in other words, they actively reshaped French institutional arrangements (Hancké, 2002). Liberalization in the 1980s and global and regional integration acted to sharply reduce the scope for state intervention. As in several other countries, France has shifted away from promoting large firms as 'national champions' towards broader-based support for SMEs but with ambiguous results (Parker, 1999). Clift (2004) points out that the French state remains attached to major policy initiatives, such as the 35-hour week, and defence of the public realm within the remaining space for policy activism, but its scope has been curtailed.

In terms of the institutional complementarities the French case illustrates the possibilities of rapid change. As noted above, liberalization has led to a rapid transition to a market-based financial system. France has grown relatively rapidly and achieved world frontier levels of technology; it has reversed its tendency towards relatively high inflation and reliance on devaluation to ensure external competitiveness. Despite the success of competitive deflation policies in securing productivity growth and low inflation unemployment has persisted and strained the high social insurance model. This is despite greater formal and informal labour market flexibility (Clift, 2004; Jefferys, 2000); restrictive macroeconomic policy, human capital accumulation and physical capital investment may all have played key roles in determining French unemployment. Despite various attempts to emulate the success of the German apprenticeship system, French levels of educational achievements exhibit relatively high degrees of inequality. This may partly explain the relatively high differentials in French unemployment rates by levels of educational achievement. The overall competitive framework has increased significantly with EU and global integration; whereas the continental European model could be characterized as a case of 'regionalism (EU) favoured over multilateralism' (Amable, 2003, p. 99), with deeper integration and Eastern enlargement of the EU the space for a distinctive model appears squeezed.

8.3. Social Democratic Capitalism

It was primarily the ability of social democratic economies to sustain successful adjustment that interested scholars and the wider policy community as an alternative strategy to decentralized market-based ones to secure full employment with relative equity and welfare support. As noted above, much of the recent work on social democratic economies has explained their worsening employment performance in term of egalitarian policies and high tax levels and claimed that their policy distinctiveness now lies in the field of human capital policies. The basis for these claims, though, is not robust and particularly downplays the effects of demand-side factors in the context of downturns.

As an ideal type at least, social democratic economies combined centralized wage bargaining combined with concentrated firm ownership largely protected from active capital markets enabling patient long-term finance; the focus on high-quality production rests in large part on high levels of skills and education (Amable, 2003, Ch. 3). The extensive welfare states

provided insurance against risks associated with flexibility and openness. Erixon (2004) argues that the Swedish post-war model in particular was based upon wage solidarity policies to ensure structural adjustment, active labour market policies and mildly restrictive macro policies. The characterization of egalitarian wage bargaining here is arguably misleading; in its original post-war conception this was closer to 'equal pay for equal work' conceptions intended to ensure that wages reflected the job done rather than profit differences between companies (Erixon, 2004). Wages were set with reference to the competitiveness of the external sector and with the expectation of steady capital investment.

In key respects these components have been eroded over the past 20 years. Their financial systems have become more Anglo-Saxon in character with high levels of foreign ownership. Wage bargaining systems have been decentralized to varying degrees so that the extent to which they can ensure wage solidarity and/or that wage rates are targeted at achieving external balance has diminished. Active labour market policies remain important in terms of their expenditure levels, but their effectiveness has been widely questioned. Reconciling social democratic aims with adequate levels of profits and investment had been seen as central to their endeavour. Although social democratic economies have seen profit rates and shares rise since the mid-1980s, so that they are comparable or even higher than for the post-war golden age, rates of capital accumulation have not returned to earlier levels. It is not clear that social democratic economies had any particular advantage during the 1990s at ensuring orderly adjustment and maintaining investment and growth over the medium term. Financial liberalization and integration has, by increasing the exit possibilities for capital, acted to weaken the social bargain underwriting this investment effort. Governments have become increasingly constrained in making side payments to either group and in their ability to use macroeconomic policy to ensure effective demand. Thus, the conditions underlying the corporatist bargains for capital accumulation have been significantly undermined since the early 1980s. The Swedish case shows a strong research intensity that is decreasingly reflected in domestic patterns of production with Swedish multinationals, unlike those from other developed countries, expanding their high-valued production overseas whilst retaining relatively lower value production at home (Blomstrom, 2000; Edquist & McKelvey, 1998). Globalization has thus acted to undermine the post-war economic model by reducing the degree to which technological rents are retained nationally.

This is not to say that these economies have performed poorly or their characters have been erased. Although, the expansion of state activity may

have reached its limit with the exhaustion of the capacity of the state to act as employer of last resort, state expenditure remains at high levels. They retained above-average employment/population levels, albeit with low or negative employment growth in the 1990s. Evidence of rising equilibrium unemployment rates in these economies is weak and demand side factors appear to be important in explaining their unemployment levels over time. Wages and household incomes remain relatively egalitarian. Critics of the Swedish model often point to its worsening relative income position, but this is largely due to the level effects of the early 1990s recession rather than trend deterioration in growth rates (Cerra & Saxana, 2005). Both Finland and Sweden have experienced rapid growth in 'new economy' ICT industries and, unlike the major continental European economies, these have given a significant boost to their productivity growth. Although, questions have been raised over both the extent of any productivity boost or externality effects and the extent to which this is largely the product of a very small number of large firms (Daveri & Silva, 2004; Edquist, 2005; Jalava & Pohjola, 2002) – and, by extension, the extent to which their economic model was irrelevant or even a hindrance to the development of ICT industries – to a large degree these parallel debates over the 'new economy' in the paradigm case of the US.

8.4. East Asian Capitalism

The evolution of the East Asian model outside Japan remains unclear as the working out of the 1997 financial crisis continues. Within Japan the post-war model has undergone radical change with the collapse of the bubble economy in the 1990s, without a clear set of institutional arrangements emerging. The political responses to the crisis illustrate the limits of the post-war Japanese political system in undertaking effective reform and transformation (e.g. Pempel, 1998).

A summary of the Japanese model that would gain reasonable assent is given by Matsuura et al. (2003):

> The chief features of this system are: a financial intermediation system centered around 'main' banks and lead underwriters; seniority-based pay and long-term employment; inter-corporate relationships, involving a closely linked group of firms, known as 'Keiretsu'; and minute government regulation covering a wide range of economic sectors.

All these key features have been sharply eroded. The proportion of the economy under MITI measures has fallen with structural change in the

Japanese economy and MITI's power within the government apparatus appears to be diminishing as its budget and personnel fall relative to the rival competition agency, the Japanese Fair Trade Commission (Matsuura et al., 2003). This is hardly surprising given the pressure for external liberalization from global and regional agreements and bilateral pressure from the USA. Cross-shareholding in Japan has been falling since the 1980s; much of this is accounted for by non-financial enterprises selling their shares in banks, not least because of the poor performance of those banks. As noted above, the organization of financial system around 'main' banks has diminished for large firms with the 1990s crisis.

Internationalization of Japanese enterprises and the 1990s crisis have undermined all of these features. Large firms have become less reliant on main banks and the banks themselves have ceased to play their traditional role in the 1990s crisis. So far there has been limited erosion of long-term employment relations amongst those sections of the work force to which this applies; nevertheless, employers wish to change these relations and pay relations do appear to have changed. Matsuura et al. (2003) found that inter-corporate relationships have tended to decline, partly with increased production overseas and increased competitive pressure to switch suppliers as enterprises have more become profitability focused. Under internal and external pressure Japan has liberalized much of its post-war interventionist regime. Increased multinational operations by Japanese corporations have hollowed out production so that their production has become increasingly dissociated from Japanese economic development in general (Cowling & Tomlinson, 2000, 2002).

9. CONCLUSIONS

The focus of varieties of capitalism work is almost bound to be on national differences rather than common trends, on institutional persistence rather than change. Discussions tend to emphasize long-term continuity in institutional structures, often back decades or even centuries. The logic of conceiving of countries as having an ensemble of mutually reinforcing institutions is that change in just one would undermine the whole system. Sometimes analysts of national capitalisms do trace through the unravelling of systems in response to changes in just parts of them; more commonly there is a tendency to downplay the extent and significance of any changes and assert that each national model persists and remains viable. Further, the analytical tools we have to analyse institutional change are much weaker

than those to analyse the effects of institutions. Measuring the degree of institutional change and accounting for it pose methodological challenges. Whether inspired from game theory or more discursive historical analysis, accounts of institutional change typically remain at the level of plausible stories: we can produce explanations that fit available evidence, but so do other accounts and few analyses systematically compare possible accounts and evaluate which has greater explanatory power. Lane (2003) makes the important point that such accounts provide limited guidance for determining whether observed transformations conform to established paths or constitute deviations from them.

Nevertheless, it is one thing to argue that there is no simple logic that globalization will lead to convergence to an Anglo-Saxon model; it is quite another to suppose that greater international integration will have little significant impact on domestic institutional arrangements. In the past national stakeholders were compelled to achieve socially beneficial bargains they would not voluntarily have chosen; globalization processes may weaken the basis of such bargains, and the commitment of business to them in particular. The key argument here is that significant institutional change can and does occur, in part in response to globalization forces.

More specific claims advanced here may be summarized thus. First, here is no clear relationship between institution arrangements and economic performance; in many ways this is readily explicable within an institutionalist approach; perhaps more surprisingly the result also appears to hold for indicators of the degree of congruence of institutions. Second, state intervention has diminished with internationalization. The evidence on France and Japan is that even the traditionally most interventionist states have seen significant declines in their industrial policy. Third, attempts to posit a common system of labour relations within nations or groups of them obscure as much as they reveal; under globalization firms are experimenting with a variety of industrial relations strategies. Fourth, whilst differences in financial systems persist, there are grounds for expecting a shift towards market-based systems and some evidence this is occurring. Further, there may deleterious effects of this: Stockhammer (2004) shows the negative impact of 'financialization' on investment and thence on employment creation. Fifth, there is no simple convergence in welfare systems, but countries face broadly similar challenges and some commonalities in their responses can be delineated.

This paper is not intended to take fundamental issue with attempts to explain the variety and persistence of types of capitalism, but to suggest more emphasis needs to be put on explaining the dynamics of change.

NOTES

1. On the general problems with testing game theory see Rizvi (1994).
2. There are similarities between the institutional arrangements between Korea and Taiwan (e.g. Weiss, 2004), but interesting differences in their financial systems in particular (Perraton & Clift, 2004 p. 229).
3. The analysis here is confined to developed economies. Boyer (2005) notes possible continued differentiation within capitalism with emerging market economies; data on institutional arrangements in developing and transitional economies is relatively scarce but Pryor (2005) found they tended to most closely resemble the southern European group.
4. To take a key example, Amable (2003) and Boyer (2005) see car production as a key sector 'requiring major coordination efforts and mobilizing a localized but accumulated type of competency' (*ibid*.: 532) characteristic of meso-corporatist economies. Whilst the travails of the US car industry are well known, American car production boomed through the 'new economy' 1990s and it played a key role in sustaining US expansion after the collapse of the dot.com bubble (Rutledge, 2005, Ch. 9).
5. To take a high profile example, it is doubtful whether the architects of the SEM intended to end the football transfer system, but the provisions made developments along the lines of the Bosman ruling virtually inevitable.
6. Here again the attempt to argue that neo-liberalism in the UK was significantly more thorough-going than the US due to the former's majoritarian political system (King & Wood, 1999) is hard to sustain: the defeat of the air traffic controllers' strike early in Reagan's presidency was a key turning point in post-war US industrial relations.
7. It is unclear in Iversen's account whether the decentralized extreme is purely a hypothetical position or is intended to represent the position of Anglo-Saxon economies like the UK and US. Soskice (2000) shows that a decentralized system should always lead to lower equilibrium unemployment than coordinated wage bargaining systems unless the latter are perfectly effective. Nevertheless there are important qualifications to this in practice: bargaining in Anglo-Saxon economies is not purely decentralized, with unions retaining some power; amongst co-ordinated bargaining economies active labour market policies may help boost employment rates further.
8. Amable (2003) concludes with a very positive assessment of Danish flexicurity as a possible future model for European capitalism; its institutional strengths appear overstated.
9. Thus, for example, a US Government 1999 report declared: 'America's competitiveness and the prosperity of our people in a changing economy depend increasingly on high-skill, high wage jobs. Realizing our potential will require investing in education and learning for all of our people throughout their life-times.' (Quoted in Brown, Green, & Lauder, 2001, p. 1).
10. This can also be seen at other levels. Whereas Amable (2003, p. 106) points to 'non-homogenized secondary education' as characterizing market-based economies, since the 1980s English schools have taught a centrally prescribed National Curriculum. In arguably a specific example of Schwartz (1994), English schools have been granted greater autonomy from elected local authorities whilst facing increased central pressure to standardize their output.

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LIMITS AND ALTERNATIVES TO MULTIPLE REGRESSION IN COMPARATIVE RESEARCH

Michael Shalev

This paper criticizes the use of multiple regression (MR) in the fields of comparative social policy and political economy and proposes alternative methods of numerical analysis. The limitations of MR in its characteristic guise as a means of hypothesis-testing are well known. The emphasis here is on the specific difficulties of applying MR to the problem of explaining diverse outcomes across a limited range of country cases. Two principal conclusions will emerge. First, even though technical means are available to deal with many of the limitations of MR, these solutions are either unconvincing or else require such advanced technical skills that they offer questionable returns on scholarly investment. Second, dissatisfaction with MR does not necessarily mandate radical alternatives or abandonment of numerical methods altogether. ''Low-tech'' forms of analysis (tabular and graphical methods) and multivariate statistical techniques other than MR (such as factor analysis) constitute viable and useful alternatives.

The comparative study of welfare states is a good example of the characteristic methodological polarization that afflicts the social sciences. Historians and social policy analysts with an intrinsic interest in welfare states engage in descriptive and prescriptive studies, while at the other extreme are ''hard-nosed'' social scientists who regard the welfare state essentially as a

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convenient source of data for testing abstract theoretical claims. The sociologists and political scientists who began studying social policy in the late 1970s were part of the quantitative revolution in comparative studies. Using simple correlation and regression analysis, they optimistically hoped to settle the competition between a handful of master explanations for variation in the size of welfare states (Amenta, 1993; Shalev, 1983). Over the last two decades there has been a compelling trend toward greater sophistication in quantitative work (for a pioneering compilation see Janoski & Hicks, 1994). Especially noteworthy is the growing recognition by comparativists of the limitations of simple cross-sectional uses of MR, and their attempts to overcome these limitations without sacrificing the power of regression. Indeed, refined data analysis is the hallmark of a new and statistically more literate generation of scholars (see particularly the series *Cambridge Studies in Comparative Politics* including works by Boix (1998), Garrett (1998), Iversen (1999), Franzese (2001) and Swank (2002)). At the center of these studies are complex analyses of pooled datasets that cover multiple countries at multiple moments in time.

Earlier works in comparative political economy tended to focus on explaining enduring cross-national differences (more rarely, they looked at differences between countries in historical dynamics). The standard tools of the trade were scatter-plots, correlations and primitive cross-sectional regressions (e.g. Tufte, 1978; Cameron, 1984). This was true even of methodologically advanced practitioners (e.g. Hibbs, 1978; cf. Shalev, 1979b). The turning point was a controversial cross-national regression study by Lange and Garrett (1985) which sought to show that the combination of strong unions and left governments was beneficial for economic growth following the first "oil shock". In a final response to their critics Garrett and Lange (1989) suggested that the debate could only be resolved by the use of a pooled cross-sectional time series design, which in addition to furnishing a much larger number of observations would enable researchers to directly study whether the effects of changes in government composition are conditioned by national institutional contexts. Two years later Alvarez, Garrett, and Lange (1991) published their seminal article "Government Partisanship, Labor Organization, and Macroeconomic Performance" which turned pooled regression into the design of choice for quantitative comparative political economists.

Alternative approaches include Ragin's (1987, 2000) innovative attempts to formalize the analytical approach of traditional comparative-historical scholarship, and Berg-Schlosser's demonstrations of alternative multivariate techniques (e.g. Berg-Schlosser & De Meur, 1997; Berg-Schlosser, 2002).

However, especially in the United States these methods have had little impact.[1] So far the only significant qualification to the dominance of MR in general and pooled models specifically in quantitative work on comparative political economy, has been the insistence of some practitioners on the necessity for constructive dialog between comparative history and multicountry regression analysis (see especially Hall, 2003). John Stephens and his collaborators have been the most committed exponents of this approach (Rueschemeyer, Huber-Stephens, & Stephens, 1992; Huber & Stephens, 2001), although case studies also play a subsidiary role in several notable applications of pooled regression (e.g. Boix, 1998; Iversen, 1999; Swank, 2002). Perhaps the most telling symptom of the hegemony of regression in quantitative comparative research is Gøsta Esping-Andersen's (1990) seminal work on welfare state regimes. It is striking that after offering a forceful critique of the core assumptions of conventional methodology, Esping-Andersen himself turned to MR in order to assess the empirical validity of his arguments.

The final section of this paper reanalyzes Esping-Andersen's data using techniques better suited to his theoretical and methodological premises. The preceding section offers an extended critique of pooled regression analysis. Prior to these two parts of the paper I first present an overview of the deficiencies of MR as a tool of macro-comparative research and then offer two detailed illustrations of how standard applications of MR in comparative research can generate misleading results that are inferior to those obtained using simpler methods.

STRENGTHS AND WEAKNESSES OF MULTIPLE REGRESSION

The difficulties that MR poses for comparativists were anticipated 40 years ago in Sidney Verba's essay "Some Dilemmas of Comparative Research", in which he called for a "disciplined configurative approach … based on general rules, but on complicated combinations of them" (Verba, 1967, p. 115). Charles Ragin's (1987) book *The Comparative Method* eloquently spelled out the mismatch between MR and causal explanation in comparative research. At the most basic level, like most other methods of multivariate statistical analysis MR works by rendering the cases invisible, treating them simply as the source of a set of empirical observations on dependent and independent variables. However, even when scholars embrace the analytical purpose of generalizing about relationships between variables, as opposed

to dwelling on specific differences between entities with proper names, the cases of interest in comparative political economy are limited in number and occupy a bounded universe.[2] They are thus both knowable and manageable. Consequently, retaining named cases in the analysis is an efficient way of conveying information and letting readers evaluate it.[3] Moreover, in practice most producers and consumers of comparative political economy are intrinsically interested in specific cases. Why not cater to this interest by keeping our cases visible?

Different views of causality are an equally celebrated source of the debate between case-oriented and variable-oriented researchers. Andrew Abbott (1998, p. 183) has cogently argued that "all too often general linear models have led to general linear reality, to a limited way of imagining the social process". Abbot notes the constricted theoretical scope of the notion of causality underlying linear models, which cannot recognize (or at least is unlikely to recognize) situations where the effect of any given causal variable is uneven, contradictory (dialectical), or part of a wider bundle of factors sharing an elective affinity. In the social world effects are typically contingent upon their setting, including two types of historical contingency: temporal context (period effects) and time paths (particular historical sequences or cumulations). The problem is not that MR does not have or could not invent technologies for dealing with such complexities. Non-linear functional forms, interaction effects and (in time series analysis) complex lag structures immediately come to mind. The point is that because such techniques are either difficult to employ or impose a steep statistical penalty due to the "small-n problem", they are rarely or insufficiently used.

Case-oriented analysis easily accommodates the nuances that concern Abbot and likeminded critics, because it assumes from the outset that the effect of any one cause depends on the broader constellation of forces in which it is embedded ("conjunctural causation" in Ragin's words). If MR models try to emulate this assumption they are likely to quickly exhaust available degrees of freedom. MR is even more challenged by another causal assumption that flourishes in case-oriented analysis, namely that there may be more than one constellation of causes capable of producing the phenomenon of interest. That is, some cases are explained by one causal configuration and others by a different configuration. Statisticians refer to the phenomenon of multiple pathways to a common outcome as causal heterogeneity. MR models cannot handle this simply by increasing the number of independent variables. The results will be ambiguous because they will be unable to distinguish between additive effects, conditional relationships and multiple causal pathways.

The difficulty may be illustrated by a well-known finding of comparative welfare state research. Two subtypes of European welfare states that developed under different political auspices – Social Democracy and Christian Democracy – are known to be high spenders (for landmark studies, see Korpi, 1983; Van Kersbergen, 1995). This presents no problem for the standard additive regression model provided that the two effects are equivalent and unrelated – if for instance a strong social-democratic party could be expected to have the same effect whether or not it governed in coalition with a Christian-Democratic party. However the Austrian experience suggests that this is unlikely since historically, the black half of the "red-black" coalition severely constrained its welfare state development (Esping-Andersen & Korpi, 1984). This suggests the need for an interactive (conditional) model.

A more radical challenge to the linear additive model is posed by Esping-Andersen's (1990), later claim that Christian-Democratic welfare states have both a policy logic and a political logic that are qualitatively different from those of Social Democracy. Although in terms of overall expenditure both social policy regimes are relatively costly, they represent two different causal syndromes that in respect to expenditure happen to result in similar outcomes. The standard regression model would treat the two political constellations as two independent variables and force them to compete to explain variance in the dependent variable. As a result the real effect of both would be diluted. And what of the hybrid Austrian case? In practice, except for the liberal English-speaking nations nearly all of the advanced political economies tend to be *either* Christian-Democratic or Social-Democratic. The peculiarities of Austrian social policy should thus be understood as the result of this cohabitation and its particular historical sequencing. They cannot be represented causally by summing the effects of the two political trends (additive model), or by trying to infer from the singular Austrian experience a law-like effect of their juxtaposition (interactive model).

To appreciate why MR is a problematic choice for comparativists, it is also helpful to consider why it may be a good choice for certain other kinds of social scientists. Economists are often interested in estimating the marginal effect of one economic variable on another, holding constant the impact of other presumed causes. If prices rise, what will be the likely effect on economic growth, net of other known influences like the rate of investment and the terms of trade? If people invest in a college degree, what will be the likely effect on their future income stream, net of other known influences like work experience? MR suits this project well. Estimating marginal effects under conditions of ceteris paribus is precisely what it aims to do.

In contrast, much of the curiosity of comparative political economists revolves around the presence or absence of certain conditions. Will economic growth be higher in the presence of corporatist trade unions (or a hegemonic social-democratic party, or an independent central bank)? It would be nice to know *how much* growth results from *how much* corporatism, but our theoretical interests are typically far more elementary and our predictions quite imprecise.

The evaluation of marginal effects in macro-comparative research is also dogged by the ambiguity of many of the variables of interest and the difficulty of measuring them precisely.[4] Concepts like corporatism are so contentious that even categorical measures exhibit worrying inconsistencies (Kenworthy, 2001; Shalev, 1990). Some theoretical approaches in comparative politics are almost immune to successful quantification. An example is state-centered theory (e.g., Weir & Skocpol, 1985). Although the problem may partly be theoretical slipperiness, only superficial aspects of the structure of states (such as constitutional provisions) have proven to be measurable (e.g. Huber, Ragin, & Stephens, 1993). The framing of political action and agendas by state capacities, policy legacies and the autonomous initiatives of state managers has not been given serious consideration except in non-formal historical research.[5] In contrast, naturally continuous variables like "left party cabinet representation" can be measured precisely. Unfortunately, however the use of such measures is rife with problems of both reliability and validity. Inter-country comparisons of long-term differences in left party power are plagued by the difficulty that, for example, a mean fraction of 50% of cabinet seats is consistent with either intermittent left government, stable left participation in cabinet coalitions, or a dominant left party which is unseated in midstream. Comparison over time is equally problematic, since the numbers alone cannot tell us whether the left's role in government has shifted between *qualitatively different conditions* like one-party dominance, wall-to-wall coalitions, junior partnership, pivot party facing a divided right, etc. MR could accommodate such complexity by replacing the continuous measure of left strength with a series of dummy variables, or perhaps by finding an appropriate non-linear functional form to capture discontinuities in the effect of left strength on the phenomenon of interest. But the first solution is "wasteful" of precious degrees of freedom and the second requires either good luck or an unlikely degree of theoretical sophistication.

In the behaviorist sub-fields of political science and related disciplines much of the appeal of MR derives from its comfortable fit with sample survey methodology. Because they enjoy a relatively high ratio of cases to

variables, survey researchers are able to use MR as a means of introducing statistical controls. Unlike economists they may not be motivated by an ontological view that is inherently marginalist. They use controls in the hope of dealing with causal forces that in the ideal experimental design would have been neutralized by random assignment of subjects to differential "treatments". This approach has been the subject of vigorous debate. In different ways David Freedman (1991) and Stanley Lieberson (1985) have made compelling arguments that proper statistical control would require much more sophisticated and complete causal theories than social researchers can hope to have.[6] Even assuming that comparative political economists had such theories, given the small number of cases included in their empirical research it is technically difficult for them to analyze the effect of more than a few independent variables at a time.

Staying with the survey researchers, we can identify a final reason why the appeal of MR outside of comparative research need not inspire its use within the field. To economize on resources, analysts of voter opinion or social mobility usually poll only a tiny fraction of their target population. As a result, a fair amount of the immense heterogeneity that characterizes a universe like "American voters" cannot possibly be captured in the typical sample of only one or two thousand. Nevertheless, even the most unlikely combinations of the independent variables probably do exist in the target population. From this viewpoint one of the advantages of MR is that using the observations in hand, its coefficients (marginal effects) project relationships across the whole spectrum of potential configurations of variables.

In cross-national quantitative research the situation is very different. We often analyze the entire universe of cases, and if not it is usually because of lack of data rather than sampling considerations. For the most part then, *if a particular configuration of attributes does not exist in a cross-national dataset, it does not exist at all*. To grasp the size of the problem, consider the following hypothetical example using only three independent variables and a crude level of measurement. Social security expenditure as a proportion of GDP is regressed on left party power, exposure to trade and proportion of the population over 65. All variables are measured on a 5-point scale. If we were to construct a multiway table with this dataset, it would have 625 ($5 \times 5 \times 5 \times 5$) cells. Since no study of the OECD area can have more than about 20 cases, this implies over 600 empty cells! MR in effect places imaginary countries in some of these empty cells when it seeks out the best linear fit that can be generated for the data at hand.[7] Because it estimates partial parameter effects as if all (linearly-fitting) configurations were possible, MR can easily yield problematic results.

The venerable social-democratic model of the welfare state illustrates this problem (Shalev, 1983). Andrew Martin's (1973) pioneering comparison of the US and Sweden inferred that social-democratic party dominance was the crucial difference responsible for Sweden's postwar commitment to the full-employment welfare state, compared with its glaring absence in the US. Numerous correlation and regression studies echoed this argument and went on to seemingly confirm its veracity across the whole spectrum of advanced capitalist democracies. Yet, this model could tell us little or nothing about the causes of policy variation between the US and other liberal political economies, or within the US over time. The coefficient for social-democratic rule generated by cross-sectional regressions yielded absurd inferences along the lines that with one additional decade of socialist rule, America (or a country like it) would probably boast an unemployment rate three points lower and child allowances 40% higher. This is an extreme example of the dangers of generalizing from empty cells when each of our cases is a complex historically bounded *gestalt*. Still, it cannot be denied that one of the tests of a useful causal model is that it will be capable of answering counterfactual questions – that is, of filling empty cells with hypothetical data. Indeed, it was precisely by asking how US policy would have developed under Swedish conditions that Martin and others were led to focus on the causal role of labor movement strength. However, some "cells" are so unlikely ever to be filled that they should not be part of either our computational space or our predictions (King & Zeng, 2002). The attributes of societies are not subject to infinite variation in unlimited combination with one another.

From an MR perspective, the problem of empty cells may not be intractable. If a variable capable of explaining differences between Sweden and the US offers no guidance to the contrast between Canada and the US, then our model must be either under-specified or mis-specified. If the problem was under-specification the appropriate response would be to add independent variables capable of accounting for the observed variation. But with these additional variables in the model, it might become too large to estimate on a small cross-sectional dataset. In response, we might be tempted to enlarge our dataset by combining cross-sectional observations for different years. This would have the added advantage of permitting the investigation of intra-country differences (i.e. within the US as well as between the US and other countries). As noted, this pooling strategy is the subject of a later section of the paper.

If mis-specification is the problem then the solution would be to find an explanation sufficiently general that it could accommodate a wider range of variation – between the US and Canada as well as vis-à-vis Sweden.

In contrast, comparativists steeped in the case-oriented tradition would be more likely to assume causal heterogeneity. Instead of looking for a new master explanation they would seek an additional one tailored to cases that are inconsistent with prevailing theory. Following this logic, in the comparative study of political economy and public policy it has become common to assume that distinctive causal trajectories apply to different "families of nations" (Castles, 1993). If MR is obviously not the best way of testing plural explanations, what is? This issue will be discussed later in the context of Esping-Andersen's claim that there are three distinctive welfare state regimes.

Before proceeding to the questions of whether pooling resolves the problem of "too many variables and not enough cases" and whether regression is capable of dealing with causal heterogeneity, the paper offers two specific examples of the everyday use of MR. These illustrations were chosen with an eye to countering two possible responses to the general critique of MR that has been offered so far. One of these would be to lower our expectations and utilize regression more as a means of partitioning empirically observed variance than of rigorously testing hypothesized causal relationships. Alternatively, it might be argued that the causal status of regression coefficients should indeed be treated tentatively, but that our confidence is strengthened if alternative types of numerical and non-numerical analysis yield convergent findings. Both approaches have their problems. The next section critiques an illustration of the use of MR as only a loose guide to the plausibility of alternative models. Using a different example, the section that follows shows that even convergence among different methodologies does not guarantee that the data will yield their fundamental secrets.

"CAUSAL ARGUMENTS" OR MERE "SUMMARIES"?

> With multidimensional data sets, regression may provide helpful summaries of the data. However, I do not think that regression can carry much of the burden in a causal argument. (Freedman, 1991, p. 292)

David Freedman is a statistician who believes in the power of numbers but has made it his mission to disabuse social scientists of their exaggerated belief in statistical inference as a tool of causal analysis (Freedman, 1985, 1987, 1991). The essence of the argument made by Freedman (see also Leamer, 1983) is that statistical hypothesis-testing requires that researchers have a well-developed theory and a hands-off relationship with the data

prior to the point at which testing is carried out. In practice social-science research is based on weak or incomplete theories and its empirical generalizations are almost always the outcome of numerous iterations. Accordingly, when forced to confront the fact that progress in social research rests on a "dialog of ideas and evidence" (Ragin, 1994b), one should concede that the most which can legitimately be done with MR is to use it to summarize multivariate datasets.

Given prevailing expectations regarding publishable research, few scholars have the courage to claim that their research objectives are purely descriptive (Abbott, 1998). Still, some comparative research has treated MR as less than a formal hypothesis-testing device and more like an economical method of sustaining broad empirical claims. An example of this low-expectations approach can be found in Rothstein's (1990) study of cross-national variation in union membership from a new institutionalism perspective. Although Rothstein's article was primarily based on comparative-historical analysis, it included a simple cross-country regression. The substantive background to the study was that under the so-called "Ghent system" unions bear responsibility for administering unemployment insurance, with the consequence that in periods of economic crisis or transformation their membership is unlikely to be eroded and may even increase. For theoretical reasons, Rothstein wished to demonstrate that the highest levels of unionization have been reached only in countries where this system is in place. His union density figures for 18 OECD countries in the mid-1980s reveal that Ghent is indeed present in all of the countries with the highest rates of union penetration, and only these countries. Hence, unless Ghent is but a spurious understudy for the real star of the causal show, it has been a necessary condition for rates of more than 70% unionization. Of course, this does not mean that the Ghent system is a *sufficient* condition for union success. Perhaps it merely amplifies the effects of other favorable conditions.

There are thus several possibilities that a simple table showing union membership alongside Ghent presence/absence cannot address: spurious association (alternative explanations), additional causes (complementary explanations), and interaction effects (conditional explanations). Following convention, Rothstein seeks to lay the first two of these issues to rest by executing a multiple regression that takes into account other probable influences on cross-country differences in unionization. These are left party participation in government, and potential union membership (the absolute number of employed and unemployed wage-earners).

Rothstein's model was re-estimated for this article using a modified version of his dataset.[8] Following the original, the coefficients are standardized *betas*.

$$\begin{aligned}\text{Percent Unionized} = {} & 0.47(\text{Ghent}) + 0.28(\text{Left Government}) \\ & - 0.34(\text{Log of Potential Membership})\end{aligned}$$

All coefficients are significant at conventional levels (although Left Government only marginally) and the adjusted R-squared is 0.73. The metric coefficient for the Ghent variable reveals that the net average difference in unionization between Ghent and non-Ghent systems is a striking 27-percentage points.

Notwithstanding these indications of success, it can be argued that Rothstein's use of MR is inappropriate and in part misleading. Rothstein is content, in his words, to show "that all three variables have an independent explanatory effect of about the same standardized size" (Rothstein, 1990, p. 41). However, a prerequisite for these "explanatory effects" to have causal meaning is that the model be theoretically plausible. Rothstein himself casts doubt on this, when he describes the argument for the significance of potential membership size as logically indefensible, and suggests that the left-government argument suffers from what econometricians call simultaneity bias. In addition, while the standardized coefficients indeed suggest that Ghent has at least as much empirical weight as rival explanations, because countries are invisible the results do not speak to Rothstein's core claim that it is Ghent, not left strength or small size, which differentiates between the most unionized countries and all the rest. True, this claim would have been negatively ruled out had the Ghent effect disappeared once the other variables were added to the equation. But the regression could not make a positive case for Rothstein's argument.

Beyond these specific limitations of MR in Rothstein's case, his model rests on a standard but questionable assumption. Rather than operating as a syndrome of elective affinities, the explanatory variables are assumed to exert causally distinct effects. Consequently, none of the effects is assumed to be conditional on the value of other variables – i.e. no interactions are anticipated.

A straightforward way to address these issues is to summarize causes and effects in a way that identifies different combinations of conditions (causes) with the countries that "carry" them. This requires some forethought because Rothstein's model refers to three different causal variables and his dependent variable, unionization, is not easily collapsed (it is distributed

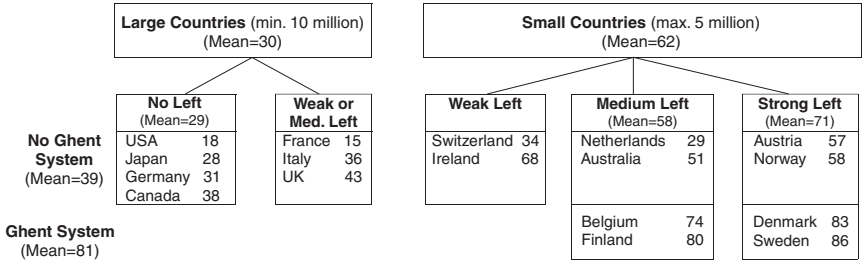

Chart 1. Reanalysis of Rothstein's Model of Union Membership.

fairly evenly across a broad spread). The proposed solution is a simple flow chart or "tree" showing exact values of unionization for different clusters of countries. These clusters were created simply by cross-tabulating the presence or absence of Ghent with categorical versions of Rothstein's two other causal variables.[9]

The results (Chart 1) offer interesting evidence of nested causal effects. This is immediately apparent from the systematic difference between extant and non-existent configurations. Substantial left party representation was only attained in small countries, and only countries with a substantial left had the Ghent system.[10] In the case of the affinity between Ghent and left strength, Rothstein himself pointed out that we cannot know which way the causal arrow points without branching into historical research. Indeed, this is true of all of the relationships among unionization, Ghent and left strength.[11] But we can say that c. 1985, it is the *combination* of smallness, "leftness" and Ghent that is associated with the highest rates of unionization. The results also hint at a more specific interaction. The Ghent effect may be stronger in countries with medium left strength than in the fully fledged social democracies.

This "unsophisticated" method of presenting the data reveals regularities that MR does not. In the process it more effectively vindicates Rothstein's thesis by making clear precisely what he wanted to demonstrate: that the Ghent effect is large and not spurious, and that it comes into play in countries where other conditions are broadly favorable to unions. But these results do something else important, which is to point the interested researcher to the most fertile questions for selective case comparisons that might help nail down how important Ghent really is.[12] In particular, it must be questioned whether the Ghent system alone can explain the very large differences in density between otherwise well-matched countries: Belgium vs. the Netherlands, and Sweden and Denmark vs. Norway.[13]

The visibility of the relationship between variables and cases in the simple diagrammatic presentation favored here may thus draw attention to anomalous cases, which reveal limitations in the theoretical model. Attending to outliers from a regression analysis is sometimes also a way of identifying anomalies, but not of the kind discussed here – namely countries that do not "make sense" *when viewed in relation to other similar cases*. Tabular or graphical presentation of the dataset with named observations permits this; inspection and diagnostic testing of regression residuals does not.

COMPLEMENTING REGRESSION WITH OTHER TYPES OF ANALYSIS

Peter Hall and Robert Franzese (1998) have contributed to a significant subfield of comparative political economy which challenges the preeminence of economists in studying central banks and their impact on economic performance (Iversen, Pontusson, & Soskice, 1999). Hall and Franzese argue that while independent banks are always anti-inflationary, under certain institutional conditions their impact on the labor market is far less salutary. Unless wage setting is centralized and coordinated the bargainers will fail to internalize bank "signals", and the result will be higher rather than lower unemployment.

In testing their argument Hall and Franzese proceed in three stages. First, they demonstrate its plausibility by referring to the paradigm case of West Germany. Second, they use data for 18 OECD countries over the entire postwar period, presented in a simplified tabular format. Finally, they use MR to test a more elaborate model at several levels of aggregation ranging from full-period means (pure cross-section) to pooled annual data. The results of each one of these analyses are consistent with their argument that the impact of central bank status on unemployment is conditional on the structure of wage bargaining.

In their initial quantitative analysis, Hall and Franzese collapse measures of central bank independence (hereafter CBI) and wage coordination and cross-tabulate them. The results clearly confirm the hypothesized interaction effect. However the authors recognize that this effect could be an artifact, the result of some confounding influence like countries' wealth, economic openness or government composition. In practice, the result survives the application of controls for these variables using MR. Conditional parameter estimates show that the interaction between independence and coordination is substantively as well as statistically significant. Moreover, diagnostic

testing indicates that these results do not depend on the presence of any particular case.

Hall and Franzese's study deserves close attention precisely because it offers such a thorough application of MR, which moreover very sensibly builds on prior qualitative research on the German case. Yet it will be shown that the study's tabular results are misleading. Missing from these results is an element which proved crucial in probing Rothstein's study, namely, identification of the cases (countries). Another issue is how best to group continuous data into categories in order to reveal multivariate relationships. It was relatively easy to categorize Rothstein's variables intuitively, but this is not the case for Hall and Franzese's data. Although formal methods are sometimes used for this purpose (e.g. Goodman's (1981) test of "collapsability"), most researchers rely on commonsense ways of determining cutoff points: substantive familiarity with the cases, aggregation into categories of similar size or tailoring the categories to breaks in the distribution of observations. Hall and Franzese provide no explicit rationale for their cutoff points. Taking advantage of the availability of their dataset,[14] Chart 2 permits direct examination of the distribution of cases along the two institutional dimensions. Visual inspection of each dimension offers no indications of categories that could be "naturally" amalgamated. Further, observing the two-dimensional patterning of the countries one is not struck by any

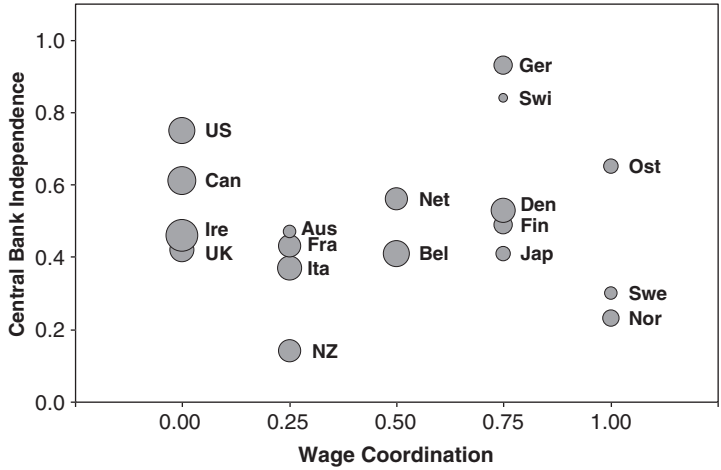

Chart 2. Institutional Configurations (X and Y axes) and Unemployment (Bubbles) (Based on Hall and Franzese).

Table 1. Institutional Effects on Unemployment (Derived from Hall and Franzese).

Wage Coordination	Central Bank Independence	UE 1955–1990	UE 1955–1973	UE 1984–1990
0.00	Lower (UK, Ire)	6.8	4.0	12.9
	Higher (US, Can)	6.2	4.9	7.6
0.25	Lower (NZ)	4.2	2.1	7.6
	Higher (Aus, Fra, Ita)	3.9	2.3	7.5
0.75	Lower (Den, Fin, Jap)	3.3	2.0	5.3
	Higher (Ger, Swi)	2.0	0.8	4.2
1.00	Lower (Nor, Swe)	2.0	1.8	2.6
	Higher (Ost)	2.2	1.8	3.5

Source: Hall and Franzese dataset (made available at the URL cited in note 15). Differences between the average unemployment rate for 1955–1990 reported here and in Table A.1 of Hall and Franzese (1998) are due to an error in the published table (Robert Franzese, personal correspondence, November 6, 2002). *Abbreviations:* Ire, Ireland; Can, Canada; NZ, New Zealand; Aus, Australia; Fra, France; Ita, Italy; Den, Denmark; Fin, Finland; Jap, Japan; Ger, Germany; Swi, Switzerland; Nor, Norway; Swe, Sweden; Ost, Austria.

obvious clustering. This suggests that Hall and Franzese may have erred in collapsing their institutional variables into dichotomies.

Is it possible without aggregation to discern the effects on unemployment, which were apparent in Hall and Franzese's aggregated figures (their Table 1)? The "bubbles" in our chart are proportionate in size to the mean unemployment rate for 1955–1990 in each country. Looking first for univariate effects, it is noticeable that as we move from left to right along the x-axis the jobless rate drops quite dramatically. No such clarity is evident when comparing unemployment rates at lower and higher levels of CBI (i.e. moving from the bottom to the top of the y-axis). Consequently, whereas unemployment is strongly correlated with wage centralization ($r = -0.74$) it is completely uncorrelated with CBI ($r = -0.07$).

The critical question though is whether "In nations where wage coordination is high, an increase in the independence of the central bank is associated with a very small increase in the rate of unemployment … . Where wage coordination is low, however, an increase in the independence of the central bank is associated with a substantial increase in the rate of unemployment" (Hall & Franzese, 1998, p. 518). Chart 2 provides no evidence for this proposition. In fact unemployment fails to rise with the extent of CBI at all levels of wage coordination. Apparently, the aggregation of Hall and Franzese's original data into categories inadvertently generated unfounded support for their hypothesis.

There is also an important substantive issue, which their analysis fails to reckon with. Studies that pool data from different points in time – whether by simple averages or complex panel analysis – implicitly assume stability in the causal relationships under consideration.[15] However, in the aftermath of the second oil shock, unemployment in most European economies rose dramatically while in North America it declined. Was this shift in international unemployment differentials, which persisted into the 1990s and beyond, accompanied by a change in the conditional impact of CBI? To find out, Table 1 compares unemployment in the postwar golden age (defined here as 1955–1973) with the period of global crisis from 1984–1990 (when the time series ends). Given that "our key institutional variables do not vary over time" (Hall & Franzese, 1998, p. 520), no attempt has been made to calculate sub-period measures of centralization and CBI. Further, to simplify the presentation Table 1 builds on the fact that *within each level* of wage coordination two groups of countries are discernable, one with higher CBI scores than the other.[16] The table permits us to evaluate whether relatively higher levels of CBI are associated with higher unemployment as coordination declines, in both the complete series and the two sub-periods.

The results confirm that the data for the postwar period as a whole do not fit expectations, but they show that in the period prior to 1974 there is some support for the predicted conditional relationship. This support would be stronger but for the fact that the two uncoordinated economies with low CBI, Ireland and the UK, experienced very different unemployment rates. The CBI "penalty" in this period thus turns heavily on the question of whether the role of the central bank can carry the main explanatory weight for the contrast between the UK, with well under 3% average unemployment; and the US and Canada with nearly 5%. I believe that a stronger explanation is provided by the absence of social democracy in North America compared to the paramount influence of the Labour Party on the terms of Britain's postwar settlement (Korpi, 1991). Turning to the later period of economic crisis, Table 1 shows that the results are at odds with Hall and Franzese's expectations. Among the least coordinated economies, North American unemployment was actually lower than in Britain or Ireland.

Perhaps one should not place too much weight on evidence concerning the gross effects of institutional context on economic performance. The authors of the study saw tabular analysis as only one building block in a longer evidentiary chain that included cross-country regressions controlling for key economic and political influences on unemployment (including the variable just referred to, government partisanship). Moreover with unusual thoroughness they ran these regressions not only on cross-sectional averages

for the entire postwar period, but also used pooled time series data in the form of either decade-long averages or annual observations. They report that the results of all of these tests were consistent with their leading hypothesis.

Nevertheless, there are reasons to take a cautious view of Hall and Franzese's multivariate analysis. With four control variables entered in aggregate cross-country regressions alongside the two institutional indicators and their interaction, the model is seriously overweight for application to only 18 cases. In theory, this limitation ought to be overcome once multiple observations for each country are combined at different time points. But for reasons that will be explicated in more detail in the next section of the paper, this is questionable. For instance, as we have just seen the postwar period 1955–1990 was far from homogeneous in its unemployment record. The models used by Hall and Franzese do control for over-time variability in the overall level of joblessness, but not for the equally plausible possibility that the determinants of unemployment altered over time.[17] In addition, whether tested in sparse cross-sectional format, decade-long panels or by pooling annual time series across countries, these regression models build on a great many empty cells. The vast majority of potential combinations of collective bargaining systems, CBI, union and left party strength and trading conditions have no empirical counterparts. As in most studies of this type, multiple time frames primarily add more cases to already-populated configurations.

The implications of limited diversity in the dataset utilized by Hall and Franzese are especially worrying for their most impressive evidence – decadal averages that simulate "what difference it makes". The authors' Table 4 presents expected levels of unemployment for 15 different institutional configurations, calculated by fixing control variables at their sample means. The results indicate that, as predicted, the effect of CBI is profoundly influenced by the degree of wage coordination. In completely uncoordinated systems unemployment is expected to be nearly *10 points higher* at maximum bank independence than at the minimum level of CBI. In completely coordinated systems there is a modest effect in the opposite direction. These results contrast very strongly with the uncontrolled effects that we have observed. However, it turns out that of the 15 cells in Hall and Franzese's table approximately two-thirds have no empirical counterparts. As it happens, the contrasts among the "extant" cells, while in the expected direction, are far more mild than those based on the hypothetical extremes of the institutional matrix.[18] Moreover the predicted levels of unemployment are seriously off the mark, higher than the real ones for decentralized systems and lower for the centralized ones.

There is a possible explanation for Hall and Franzese's inaccurate predictions of unemployment levels that also casts doubt on the veracity of their simulated effects of CBI (even for the realistic configurations). Both results may be traceable to the effect of elective affinities. As noted, Hall and Franzese adopted the typical procedure for such "what-if" exercises, allowing the explanatory variables of theoretical interest to vary while controlling for additional known influences by calculating their impact at mean levels. However as already noted in connection with Rothstein's study, different elements of the institutional context tend to cohere. For instance, coordination generally thrives in small, highly unionized economies with strong social-democratic parties but is stymied in liberal political economies with the opposite set of features. Consequently, by evaluating their control variables at the grand mean for all countries it is likely that Hall and Franzese inflated their predictions for the coordinated economies and understated them for the decentralized ones. The same bias may have exaggerated the deleterious effect of CBI in the decentralized context.

To sum up, Hall and Franzese present us with a study that is impressively well-rounded methodologically, integrating qualitative and quantitative research and moving stepwise from simple to sophisticated forms of numerical analysis. Despite this, their quantitative results are unconvincing. By failing to address temporality, limited diversity and elective affinities, their multivariate analyses almost certainly overstated the potency of the effects they sought to uncover. Their tabular analysis, based on questionable category groupings and abstracted from the cases under study, generated misleading results. In small-n comparative research even an analytical device as simple as a cross-tabulation needs to be applied with close attention to the data at hand. The pitfalls of the pooled regression models used by Hall and Franzese make it clear that more complex techniques offer no guarantee of yielding an empirically plausible account. While by now these pitfalls are well known they have not deterred comparative quantitative researchers from wholesale adoption of pooled MR as their technique of choice. The next section of the paper provides a fuller account of the problems this entails.

IS POOLING A PANACEA?

Some readers might view elements of the critique of the two articles discussed so far as just another illustration of a well-known problem: that because comparativists have "too many variables chasing too few cases", MR can only be applied either crudely (Rothstein) or else implausibly (Hall

and Franzese) in standard cross-sectional designs. My alternative approach might be criticized as a dishonorable retreat to rendering descriptive summaries of the data that are all too dependent on arbitrary decisions about how to group and present them. These critics would doubtless reject my argument that regression is fundamentally unsuited to macro-comparative analysis, and would prefer to focus their creative energies directly on solving the problem of insufficient cases (e.g. King, Keohane, & Verba, 1994, pp. 24, 30–31).

In this spirit, John Goldthorpe has argued that "*au fond* the small-N problem is not one of method at all but rather of data". Goldthorpe specifically recommends emulating the large number of researchers who "have 'pooled' data for the same set of nations for several different time-points. Observations – and degrees of freedom – are in this way increased …" (Goldthorpe, 1997, p. 8).[19] However, there are well-established reasons to believe that the most likely consequence of a turn to pooling is to muddy the causal waters still further. My critique proceeds in three stages. First, I explain why the rationale for using pooling as a means of adding statistical degrees of freedom is fundamentally flawed. Second, I demonstrate that creative attempts to overcome the difficulties of making causal inferences from pooled data are encouraging in principle but have been of limited practical benefit. Third, pooling encounters severe technical stumbling-blocks, and it is questionable whether growing methodological sophistication will reliably overcome these difficulties.

What does pooling entail?[20] Traditionally, quantitative macro-level research analyzed either "snapshots" of different countries at a single moment in time (cross-sectional data), or else period-to-period data for a single country (annual time series or sub-period averages). Pooled datasets merge these two views by "stacking" panels for multiple countries one on top of the other. Hence they embody both comparative variation between countries and dynamic variation over time. As a result analysts must contend with the technical complications characteristic of both cross-sectional and time series estimation, and practitioners face a bewildering range of technical problems and solutions. Even more basic is the well-grounded fear that pooling may be counter-productive "if thoughtful consideration is not given beforehand to the *meaning* of the aggregations in the pool" (Sayrs, 1989, p. 70).

Most comparative researchers who use pooled designs have been motivated by the traditional agenda of cross-sectional comparison, the desire to explain enduring differences between countries. These researchers implicitly regard each cross-sectional snapshot as just one more view of the same between-country variability. However, it has long been understood that the

effect of a given independent variable may be quite different in time series and cross-section "because the underlying causal structures differ" (Firebaugh, 1980, p. 333). For instance in their comparative and historical study of class conflict Korpi and Shalev (1980) observed that while temporal fluctuations in strikes followed an economic logic, with falling unemployment stimulating greater labor militancy, the cross-sectional variance followed a political logic, with lower unemployment operating as a disincentive to strong labor movements to employ the strike weapon. In this spirit, Hicks (1994, p. 171) promoted pooling precisely as a means of carrying out "systematic comparisons of cross-sectionally and longitudinally varying causal forces". But the reality is that most pooled designs utilize multiple cross-sections in order to fortify comparative generalizations, or multiple time series to fortify dynamic generalizations, on the implicit assumption that there is no difference in causality between the two dimensions.

A quite different, and more constructive approach to pooling, is to exploit the combination of comparative and over-time data in order to uncover and explain cross-national differences in over-time processes. Examples of this type of enquiry can also be found in studies of the political economy of class conflict (e.g. Hibbs, 1976; Shalev, 1979a). Time series regressions on strike activity in different countries yielded divergent results. Some scholars saw this simply as an antidote to exaggerated generalizations (Paldam & Pedersen, 1982). But others interpreted diverse parameter estimates as exemplifying the predictable effect of contextual forces on conflict dynamics (Snyder, 1975).

This has been the tack followed by the most thoughtful analysts of pooled datasets, Larry Griffin, Larry Isaac and their associates (Griffin, Barnhouse Walters, O'Connell, & Moor, 1986; Griffin, O'Connell, & McCammon, 1989). In what is still the best exposition of pooling for comparative political economists, Griffin et al. (1986) used annual data for 12 nations and 16 years to explore the effects of six economic and political variables on countries' expenditure on income maintenance. Their first finding was that the bulk of the variation in most of their independent variables was concentrated in *either* the time or cross-country dimension. This alone suggests that it would not have made sense to use a single model to explain both dimensions. And indeed, Griffin et al. found that "the average cross-national slopes and the average time series slopes … have very little in common" (p. 116). Even within the time and space dimensions, the contingency of causal relations could not be ignored. The results of annual cross-sections proved to be "extraordinarily unstable across years", even *contiguous* years (p. 111). While country-specific time series estimates were more stable, they

nevertheless seemed to "evoke markedly different processes" (p. 115). Despite these reasons not to treat pooled data simply as more data, it is rare for analysts to differentiate between over-time and cross-sectional effects or to take seriously the possibility of temporal or national specificity.[21] True, it is not uncommon for pooled models to include dichotomous variables intended to capture country or period effects. However, what these dummies actually measure are differences in the intercept or "baseline value" of the dependent variable in different countries or years. Interaction terms, far more costly in degrees of freedom, would be required to test country or period differences in *slopes*.[22]

For those mainly interested in explaining dynamic processes, on the other hand, pooling makes it possible to contemplate multiple explanations tailored to different contexts. The dynamics characteristic of a country or group of countries might be seen as both indicative of, and caused by, long-run (structural) differences. Griffin and his colleagues proposed a systematic methodology for this type of research. They suggested that time series parameters be estimated in regressions for individual countries. In a second round, these parameters would be treated as dependent variables to be explained cross-sectionally by broad-brush differences between countries (Griffin et al., 1986). While this technique may produce suggestive results (cf. Griffin et al., 1989), the credibility of the second-round results is, of course, dependent on the quality of the first round of time series estimates. Since these are typically based on short series, which may themselves be punctuated by causal heterogeneity, it is hard to be confident about these estimates.

Bruce Western (1996, 1998) has, however, offered an attractive approach to conceptualizing and estimating the type of multilevel design proposed by Griffin and his associates. Western (1996) sought to show that institutional factors like the presence or absence of corporatism could explain differences between countries in the dynamic effects of variables like government composition on fluctuations in unemployment.[23] He advocated a Bayesian approach to estimation that allows for possible contextual differences in causal dynamics, but differs in an important respect from Griffin's two-stage method. Western's technique permits estimates for individual countries to "borrow strength" from the whole sample. The implications of this are profound. It seemingly allows the analyst to take advantage of the more numerous observations and greater diversity afforded by pooled datasets, without having to assume identical causality in both time and space. Pooling would then be freed of most of the objections I have raised and, as Western explains, the issue of whether comparativists ought to generalize within or

beyond specific contexts would become a tractable empirical question rather than an epistemological conundrum.

Western's success in this regard is best assessed by considering the results of his own illustration, an analysis of unemployment using a pooled dataset for 18 OECD countries between 1964 and 1990 (Western, 1996). Impressively, he was able to demonstrate corporatism's implications in both the long and short run. Over the long run (cross-sectionally), corporatist countries were found to experience significantly lower rates of unemployment. From the dynamic (time series) perspective, the evidence supported the common claim that corporatism safeguards employment by improving the short-run tradeoff between wages and jobs. However, Western obtained puzzling findings for the dynamic effects of shifts in government composition. They appeared to show that in corporatist countries and other settings where collective bargaining is widespread, *increases in left party power cause unemployment to rise.* As always, the credibility of statistical conclusions needs to be checked against the cases. Chart 3 reproduces Western's estimates of the dynamic effects of changes in left cabinet representation. To highlight possible institutional consequences of the type Western was interested in, countries have been grouped using his indicators into three different settings –''unregulated'', ''regulated'' and ''corporatist''.[24]

At first sight, Chart 3 strongly confirms the finding that ''social democratic governments tend to raise unemployment where collective bargaining

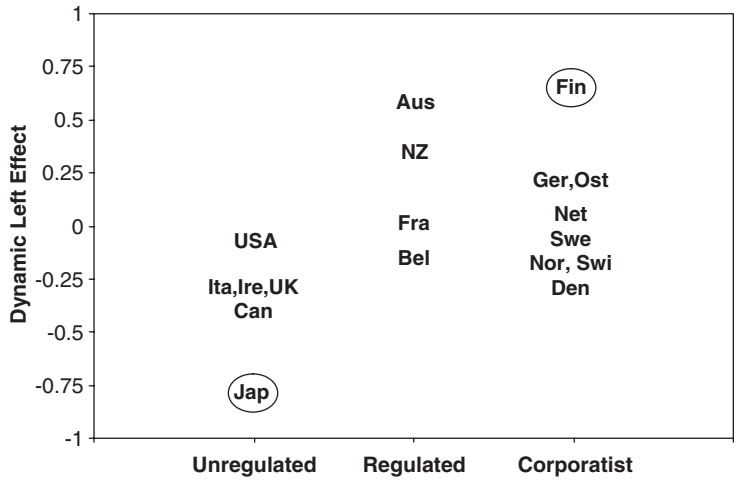

Chart 3. Western's Hierarchical Model of Unemployment.

coverage is extensive'' (Western, 1996, p. 25). However without two outliers – Japan and Finland – this tendency would be substantially weaker.[25] As it happens, the dynamic effects of leftwing governance in these two critical cases are highly problematic. During the period studied by Western, Finland experienced few significant shifts in the left's overall role in government. (What *did* vary was the relative role of the communist and socialist parties, a feature of government composition not measured in his study.) As for Japan, in the relevant period its left party representation was an unvarying zero.[26]

Western's hierarchical approach to utilizing pooled datasets holds out the possibility of harnessing their wealth of information while simultaneously respecting and even exploiting the difference between synchronic and diachronic causation. However, the key to reconciling these two objectives is ''borrowing strength''. In Western's words, ''Information from other countries will help provide an estimate for a coefficient in a particular country where, say, a given independent variable shows no variation'' (Western, 1998, p. 1240). This approach rests on a strong belief in the possibility of generalizing from ''populated cells'' to ''empty cells''. In the example at hand, the dynamic effects imputed to two cases generated extreme values that became the foundation on which a strong cross-national generalization was built. It is difficult to have confidence in such a generalization. This is a pity because Western's analytical strategy is very inviting to comparativists. Instead of merging repeated cross-sections simply in order to beef up the number of cases, he drew on the nested logic of multilevel modeling (Steenbergen & Jones, 2002). Moreover, he asked a question quintessential to the comparative method: do over-time relationships differ across countries and if so what stable differences between countries can predict those differences? Viewed this way, the pooled design offers an empirical way out of the controversy over whether causation is contextual (proper names are indispensable) or general (proper names surrender to variable names). In practice, however, since efficient estimation risks basing our ultimate conclusions on implausible counterfactual evidence, there may be no alternative to statistically unreliable country-by-country analyses.

Beyond issues concerning the analytical and practical justifications for the pooled design, as Stimson (1985, p. 945) pointed out at an early stage of the pooling revolution in political science, the technique suffers from ''a plethora of potential problems'' of a more technical kind. The validity of any regression estimate rests on assumptions about the statistical properties of the data, in particular the distribution of prediction errors. The characteristic problem for analysis of data collected at different time-points is serial correlation, which means that there is some kind of trend in the errors (e.g.

they tend to get bigger or smaller over time). For cross-sectional regressions comparing different units at a single moment in time, the typical challenge is "heteroskedasticity", meaning that the errors vary with the level of a predictor variable (e.g. corporatism may be a better predictor of unemployment in more corporatist than less corporatist countries). Further, cross-sectional errors may be "locally" interdependent. Examples commonly noted in comparative political economy are policy diffusion from one country to another through bilateral or multilateral coordination, or the economic impact of big countries on their smaller trading partners. From a technical point of view, pooled designs are the worst of both worlds. They expose regression estimates to the risks of trends in the error structure over time *and* systematic variation in the error term across units. To make matters worse these problems may appear in subtle combination, for instance heteroskedasticity could increase over time. In addition, if as we have suggested explanations may have differing applicability at different moments (or periods) and across different countries (or families of countries), then the errors will also be patterned by causal heterogeneity.

There are numerous ways to shield the accuracy and reliability of regression coefficients from these risks. However, many of them are atheoretical technical fixes that treat the deviant phenomena as "nuisance" rather than "substance" (Beck & Katz, 1996). In addition, the inferences generated by different remedies are often wildly dissimilar, while at the same time it is not entirely clear which remedy is the "right" one (Stimson, 1985). So far as causal heterogeneity is concerned, our earlier discussion has shown that conventional solutions to the problem are either wasteful of degrees of freedom or require heroic assumptions concerning the transferability of relationships from one context to another.

These issues are exhaustively treated in the pedagogical literature already referenced here (Beck & Katz, Griffin, Hicks, Stimson and others) as well as in standard econometrics texts. What bears emphasis is the questionable relationship between the costs and benefits of pooling, given that its technical complexities render it a risky and uncertain enterprise and at the same time one which imposes a steep and continuously rising learning curve. Most practitioners have responded to this dilemma by looking to "best practice" and following it faithfully – often with disastrous consequences. The breakthrough article by Alvarez, Garrett, and Lange (1991) referred to earlier utilized a Generalized Least Squares technique then regarded as state-of-the-art. However Beck et al. (1993) famously showed that because their dataset included more countries than time-points, this technique gravely inflated the significance of most parameter estimates. Subsequently,

Beck and Katz (1995) demonstrated that this problem invalidates the results of numerous well-known applications of the pooled design in comparative political economy and they introduced a new technique for estimating standard errors. Beck and Katz (1996) made the further suggestion that the dynamics generating serial correlation of time series errors should be modeled by including the lagged dependent variable as a predictor.

While Beck and Katz's proposals have subsequently become virtually canonical in modeling pooled data in political science, they have been sharply criticized by some other specialists. Achen believes that under typical conditions of high serial correlation and trended exogenous variables, ''the lagged [dependent] variable will falsely dominate the regression and suppress the legitimate effects of the other [independent] variables'' (Achen, 2000, p. 24). Specialists in international relations (where research designs are often much less constricted in degrees of freedom) have also engaged in heated debate concerning the use of pooled models.[27] An eminent econometrician has characterized Beck and Katz's prescriptions as ''not, strictly speaking, correct'', adding that ''the procedure of using OLS and reporting the 'panel corrected' standard errors is sweeping the problems under the rug'' (Maddala, 1998, pp. 60–61).

One of the few critical voices heard within comparative political economy is that of a European scholar, Bernhard Kittel. After reviewing many of its technical and practical deficiencies, Kittel (1999, p. 245) concluded that pooling adds statistical value to static cross-sectional regressions only ''under quite demanding conditions and to a very limited degree''. A more recent contribution by Kittel and Winner (2005) offers an exhaustive replication of a typical contemporary study, by Garrett and Mitchell (2001). On the basis of numerous alternative methods of testing and evaluation it is concluded that the results of this study are empirically unfounded. An even more sophisticated dissection of the same study by Plumper, Troeger, and Manow (2005) not only reveals additional technical deficiencies, but also challenges some of the main substantive conclusions drawn by Kittel and Winner.

The level of methodological expertise required to follow these kinds of debates over pooling has become prohibitive for many scholars. In rare but encouraging instances, analysts who are not professional methodologists have questioned technical orthodoxy because it generated results that simply did not make sense. Thus, Huber and Stephens (2001, Ch. 3) rejected the use of the lagged dependent variable as a predictor of social expenditure, arguing that it would have redefined their research question from assessing the long-run impact of differing political configurations to predicting short-run

fluctuations. Indeed, given the complexity of political dynamics and the poor likelihood of capturing them by crude measures like short-run changes in the proportion of the executive controlled by social or Christian-democratic parties, it is not surprising that in study after study political partisanship loses its explanatory efficacy once the design shifts from explaining levels to explaining dynamics. (See also Plumper et al., 2005; but compare Podesta, 2003.)

Because available techniques are constantly updated by statisticians and econometricians, quantitative political economists are tempted to devote much time and effort to refining their skills with pooled models. There are optimists who believe that such refinements can resolve the fundamental issues raised here, but in my judgment it is more likely that our theoretical understanding of causality will continue to far outstrip our measurement and estimation capabilities. Nevertheless, it should be noted that there has recently been a mushrooming of innovative statistical methods designed to address some of the problems discussed here.

Beck and Katz (2003) have suggested a variety of ways to systematically assess whether pooling multilevel data is justified, and Zorn (2001) has proposed a method of distinguishing between dynamic and cross-sectional effects. Braumoeller has developed new techniques for incorporating central goals of Ragin's approach into the regression framework – testing for the presence of necessary and sufficient conditions and modeling causal heterogeneity (Braumoeller & Goertz, 2000; Braumoeller, 2003). In a similar spirit, Girosi and King (2001) have devised a method of allowing explanations of over-time variation to vary across countries. But there is also bad news to report. Braumoeller's method of identifying multiple causal paths is only viable if the cases "represent all combinations of conditions" (Bear Braumoeller, personal correspondence July 23, 2005), while Girosi and King's technique seems to require a very large number of cases.

Finally, King, Tomz, and Wittenberg (2000) have proposed a simulation technique for increasing the amount of information on which statistical inferences are based, thereby enhancing their accuracy and certainty. King and his collaborators used this method to enthusiastically confirm a key finding of Geoffrey Garrett's influential book *Partisan Politics in the Global Economy*. Because this example poignantly illustrates the extent to which technique may outstrip data fundamentals, it deserves a closer look.[28]

Garrett's (1998) aim in using pooled regressions was to assess how the distribution of class power affects policy responses to globalization. These regression results were the basis for estimating expected levels of economic performance and public spending under different political configurations,

controlling for other relevant influences. Garrett's provocative findings (1998, Figs. 4.2, 5.2, 5.3, 5.4) appeared to demonstrate that in social-democratic and corporatist settings exposure to globalization pushes government spending upwards, while simultaneously enhancing these countries' superior record of unemployment and economic growth. King et al., (2000) argued that they were able to provide an even stronger foundation for these conclusions by generating 1,000 sets of simulated coefficients and expected values for the scenarios contrasted in Garrett's original study. Nevertheless, as shown by Garrett's own data (1998, Figs. 3.10, 3.12), at least until very late in the period of the investigation his key scenarios actually had no empirical counterparts.

Chart 4 provides a graphical view of the limited empirical variability of the institutional configurations tapped by Garrett.[29] The X and Y axes measure his two dimensions of exposure to globalization – trade openness and restrictions on capital mobility. The bubbles that represent each country are proportional in size to Garrett's index of "left-labor power". It is evident that the 14 countries included in the study fall into a limited number of groups that exhaust only part of the available property space. In the upper half of the chart we find a social-democratic cluster with high levels of capital restrictions. The countries with fewer restrictions fall into two main groups.

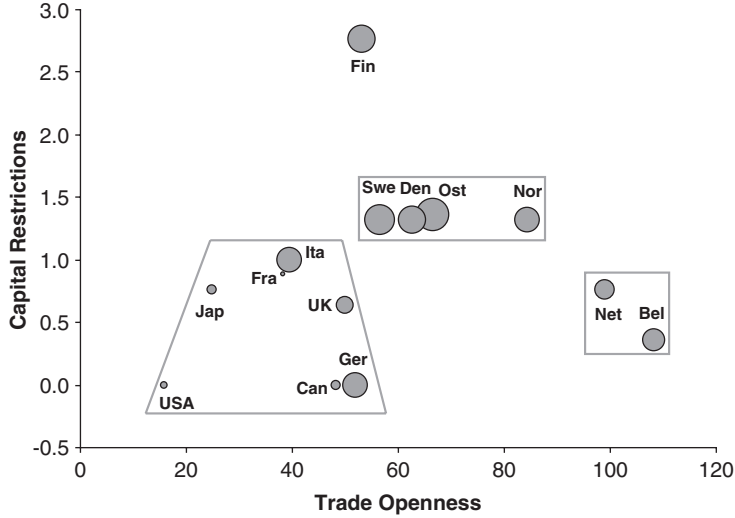

Chart 4. Garrett's Indicators of Globalization (X and Y Axes) and Left-Labor Power (Bubbles).

Belgium and the Netherlands are small states highly involved in trade (cf. Katzenstein, 1985). The remaining seven countries are all large and relatively autarchic with few capital controls, although they exhibit diverse levels of labor strength. As a result of this clustering of Garrett's key variables it is evident for instance that no countries have either very high left power and unrestricted mobility, or low power and high trade openness. Despite this, Garrett calculated estimates of how the outcomes of interest would respond to high levels of globalization under both high and low left-labor power.[30]

As King and Zeng (2002, p. 29) have argued in a different context, if "no evidence exists in our data with which to evaluate" a question, then "having time series–cross-sectional data with thousands of observations does not change this basic fact and will not make inferences like these any more secure". This reinforces my earlier contention that investments in hi-tech statistical analysis are of limited value in fields like comparative political economy, where both the number of cases and their variability are severely restricted. Indeed, as Beck & Katz have wisely cautioned, "complicated methods often move us away from looking at and thinking about the data" (Beck & Katz, 1996, p. 31).

TESTING THE "REGIME" APPROACH

If the typical practitioner of pooling is guilty of closing his or her eyes to causal complexity, in *The Three Worlds of Welfare Capitalism* Gøsta Esping-Andersen (1990) took complexity as his essential starting-point. Unusually, Esping-Andersen combined and made explicit the desiderata posited by diverse traditions of comparative research: (1) recognizing that there may be striking causal discontinuities across different contexts; (2) informing hypotheses about relationships between variables by drawing on knowledge of cases; and (3) using quantitative indicators to systematically test propositions across the entire universe of cases. As this paper has tried to explain, while obviously consistent with the third of these goals MR is markedly inhospitable to the first two.

In his quantitative analysis, Esping-Andersen adopted a two-stage approach reminiscent of Hall and Franzese – first descriptive analysis and then MR. He developed indices of "universalism", "decommodification" and "stratification" and used simple tables to show that his 18 OECD countries tend to fall into three distinct subgroups (Esping-Andersen, 1990, Tables 2.1, 3.3, 4.3). He then utilized MR to perform a causal analysis of cross-country variation in more than a dozen indicators, which were

regressed on political variables and in some cases control variables as well. However, Esping-Andersen's first technique (tabular analysis) was unnecessarily "soft", while the second (regression) is fundamentally in conflict with his analytical premises. There are better solutions, which exploit the rich data available on welfare states while respecting the theoretical assumption of causal complexity.

Esping-Andersen's tabular analysis relied heavily on his own judgment – both in the construction of indices and the identification of country clusters.[31] No *systematic* test was carried out of whether his ensemble of indicators of welfare state regimes actually do "hang together"; and if they do, whether countries indeed cluster in three distinct subgroups on underlying policy dimensions. It would have been a logical step to subject these claims to techniques like factor analysis, cluster analysis, correspondence analysis or multidimensional scaling that seek to reveal underlying proximities between different variables or cases.

Demonstration of the existence of three policy regimes was of course only a preliminary to Esping-Andersen's search for empirical support for his causal arguments. Central here was his view that different welfare state regimes embody different socio-political forces and state traditions. Using MR, Esping-Andersen did his best to demonstrate that his preferred (political) explanations garnered stronger empirical support than rival (e.g. demographic) explanatory variables. These empirical results are of questionable value, being based on regressions with 5 or 6 explanatory variables and only 18 cases. The key difficulty, however, is that asking whether political effects "matter" after "controlling for" other causes is a different and more banal question than what actually interested Esping-Andersen. As stated in his own critique of the quantitative, cross-sectional research tradition, "The dominant correlational approach is … marred by a frequent mismatch between theoretical intent and research practice" (Esping-Andersen, 1990, p. 106; see also Esping-Andersen, 1993).

The key causal argument of *The Three Worlds* is that *countries cluster on policy because they cluster on politics*. The regression approach, however, treats both policy and politics as continuous variables scattered across the whole spectrum of potential variation – not as a limited number of qualitatively different configurations with distinctive historical roots. In contrast to the causal thinking embodied in MR, Esping-Andersen would certainly *not* want to claim that, say, any discrete increment of Catholicism or absolutism ought to yield a discrete and uniform increment in the "corporativism" of pension programs. This is because *only* countries that are predominantly Catholic and/or have an absolutist past are expected to

exhibit the corporativist policy profile. By the same token, he would also not claim that the social policy of any given country may be understood precisely as the combined effect of Catholicism, absolutism and working class mobilization. (As in, "to make a loaf of bread combine 1 part yeast, 2 parts water and 10 parts flour …") On the contrary, a central purpose of his book was to demonstrate how the socialist, Catholic-Conservative and liberal political milieux have generated three different worlds of welfare. We may speculate that Esping-Andersen adopted MR out of deference to convention. He applied it as a blunt instrument for tapping gross differences between groups of countries, differences that arguably could have been more effectively conveyed by the use of tables and charts without the implication of constant linear effects across different contexts.[32]

How might Esping-Andersen have exploited his quantitative data without falling back on the conventional statistical paradigm, which is so out of keeping with the spirit of his analysis and his critique of earlier work? Three early investigations offered innovative suggestions. Ragin (1994a) carried out an elaborate study of pension policy using seven different explanatory variables, by means of his own technique of qualitative comparative analysis (QCA). In the same volume Kangas (1994) compared the performance of QCA with cluster analysis and traditional regression techniques for testing a simplified political model of the quality of sickness insurance. A third study, by Castles and Mitchell (1992), used descriptive data to build an alternative typology of four overall worlds of welfare capitalism. Methodologically, while Castles and Mitchell refrained from going beyond the presentation of simplified tabular data, both Ragin and Kangas utilized cluster analysis to assign countries to regimes. But these creative efforts ran into serious difficulties. Kangas had trouble finding the Liberal countries and Ragin was placed in the awkward position of having to assign one third of his countries to a "spare" category, which automatically excluded them from his analysis. In performing cluster analysis of countries both authors were forcing them to fit into a single regime, thereby predetermining an issue in need of empirical exploration.[33]

This issue has continued to bedevil subsequent research. A review by Arts and Gelissen (2002) concludes that Esping-Andersen's typology has received only partial support from the empirical literature. According to these authors the typology is challenged because a significant number of countries lie between regimes. In their view, the imperfect fit between country cases and Esping-Andersen's regimes indicates that more categories should be added to the typology. These conclusions reflect a common misunderstanding of the three worlds of welfare capitalism as referring literally to three discrete and mutually exclusive groupings of countries. However Esping-Andersen's

core analytical concept was not "worlds" but "regimes", that is to say *ideal-typical policy profiles*. As ideal-types they can be expected to resonate with the experience of some nations, but not to accurately describe all of them. On the contrary, hybrid cases are to be expected and the typology should help characterize and understand them more clearly. Finally, as already noted Esping-Andersen sees welfare regimes as reflecting three different political contexts. Hence the empirical usefulness of the regime typology should also be judged by whether countries' placement with respect to regimes is paralleled by their political characteristics.

To summarize: (1) It is policy profiles and not necessarily countries that ought to follow a tripartite division; (2) The proximity or distance of a country's policy profile from the three ideal-types should be matched by its political configuration; and (3) Policy regimes and their political underpinnings should together inform our understanding of individual countries. It follows that rather than seeking to assign countries to regimes, researchers should aspire to uncover underlying dimensions or profiles from cross-country correlations among policy indicators. Put differently, reducing a battery of *variables* to a few underlying dimensions is preferable to grouping *cases* into a few clusters. In light of this distinction it is not surprising that in Arts and Gelissen's review of empirical tests of Esping-Andersen's typology, the former methodology generated more supportive results than the latter.[34]

Practically speaking, researchers interesting in uncovering policy regimes can choose from a variety of techniques, including factor analysis (Shalev, 1996) and its cousin, Principal Components Analysis (de Beer et al., 2001; Hicks & Kenworthy, 2003).[35] One of the attractive features of these methods of reducing data into a smaller number of dimensions is that they are not at all fazed by a multiplicity of variables. On the contrary, while the existence of a wealth of explanatory variables is the acknowledged bane of cross-national research, multiple indicators are actually desirable if the purpose is to more parsimoniously characterize the dependent variable.

What underlying dimensions would we expect to find if Esping-Andersen's typology is correct? I believe that analytically his triplet of regimes rests on two dimensions of policy. One of them is a dichotomy that is unabashedly similar to Titmuss' (1974) classic distinction between "residual" and "institutional" welfare state principles, often illustrated by contrasting the United States with Sweden. A second dimension, dubbed "corporativism" by Esping-Andersen, captures the fragmented, hierarchical and status-preserving measures pioneered by Catholic-Conservative welfare states, measures that were anathema to *both* socialist and bourgeois forces. It follows that if

Esping-Andersen is right about there being three ideal-typical worlds, we should be able to parsimoniously characterize the policies of actual welfare states in terms of these two dimensions.[36]

Esping-Andersen's original *The Three Worlds* volume identified several different loci of welfare state variation: social rights, social spending, the public/private division, and employment policy. The present reanalysis is based on 13 of Esping-Andersen's policy indicators[37] and uses factor analysis to test whether the distribution of specific indicators follows the hypothesized two dimensions.[38] Factors are economical linear combinations of variables. They are generated in such a way that there is strong correlation between the variables with the highest "loadings" on a given factor, but minimal correlation between different factors (ideally they are completely uncorrelated or "orthogonal").[39]

The results of an unrotated principal component factor analysis are reported in Chart 5. The first two factors together account for the majority (nearly 60%) of the variance, good news for Esping-Andersen's model. The first factor, which runs between the East and West of the chart, evidently captures the residual/institutional dimension. It exhibits high positive loadings on public employment, active labor market expenditure, benefit equality and social security spending; and strong negative loadings on poor relief and indicators of the scope of private health and pension provision. The

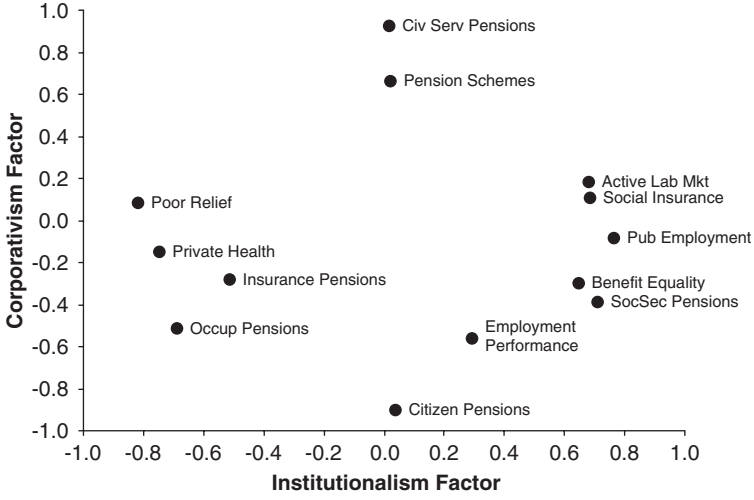

Chart 5. Two Factor Solution for Esping-Andersen Data.

second (North-South) factor signifies the corporativist dimension of policy. It has high positive loadings on the number of pension schemes and the prominence of civil service pensions, and a high negative loading on the role of ''citizen pensions'' (social security). The factors are not completely orthogonal, but the areas of overlap are intelligible. For instance, the results confirm that both the corporativist and institutional policy clusters are alienated from occupational pensions. They also imply that in the 1980s, when Esping-Andersen's data were collected, employment performance (low unemployment and high job creation) was stronger in the institutional regime than in the residual or corporativist regimes.

We now evaluate Esping-Andersen's political explanation for the origins of the three policy regimes. Chart 6 arrays the 18 nations in his study in accordance with their scores on our two factors. The evident linkage between policies and their political context generates an illuminating cross-national mapping. In particular, the findings support the clear distinction in Esping-Andersen's (1990) book between the following three families of nations:

- *Socialist:* The Scandinavian social democracies, characterized by levels of working class mobilization almost without peer in other Western nations.
- *Catholic-Conservative:* Continental European nations – Italy, France, Belgium, Austria and Ireland – which share an absolutist past, relatively late-blooming democracy and a largely Catholic population.

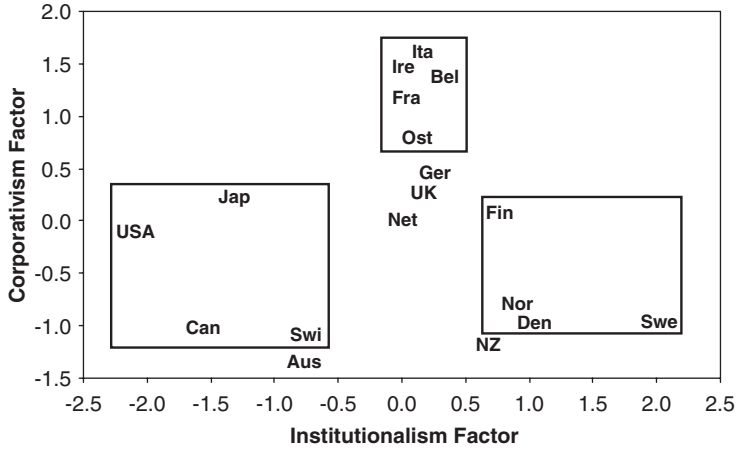

Chart 6. Social Policy Factor Scores.

- *Liberal:* The USA, Canada, Switzerland and Japan – in which working class mobilization is very weak and, in North America, the conservative heritage is absent.

The remaining five countries in Esping-Andersen's study are more difficult to classify. They have experienced moderate levels of working class mobilization but their state traditions are either close to the conservative group (Germany and the Netherlands), or were exposed in formative periods to liberal influences (the UK) or to the peculiar conditions of Antipodean settler societies (Australia and New Zealand).[40]

The fit between the three political clusters and countries' placement on the two policy factors is substantial. The liberal states and Australia have the most negative institutionalism scores, while the Scandinavian states along with New Zealand have the highest positive scores. Most of the remaining countries are conservative states, and as expected they score indifferently on institutionalism but above average on the corporativism factor. Two mixed cases (Britain and the Netherlands) score close to zero on both factors, confirming their ambiguous status rather than making us wish they would go away.[41]

Our analysis largely supports Esping-Andersen's vision of three different policy constellations powered by three different constellations of political power. The key point is that this empirical support was garnered without the mismatch between ontology and methodology that is exemplified by the use of MR in *The Three Worlds*. Esping-Andersen's analytical reliance on ideal-types in the context of an ambitious program of comparative and historical research recalls the classic sociological tradition, one which continues to inspire many comparativists. His goal of subjecting the theory of welfare state regimes to systematic empirical test was also admirable, but MR was ill-suited to this task. I have tried to show that methodological alternatives are available which do not require sacrificing either quantification or the ambition of supporting causal claims through empirical generalization.

CONCLUSION

Despite considerable methodological debate and innovation among comparativists in recent years, MR remains by far the predominant mode of numerical data analysis and most of its critics see qualitative analysis (whether formal or not) as the only real alternative. This paper seeks to promote a third way. I recognize that Charles Ragin's innovations, QCA

and more recently "fuzzy-set" analysis (Ragin, 1987, 2000), point to another strategic alternative. Ragin's techniques constitute a synthesis of the qualitative and quantitative traditions aimed at explicitly testing the kind of "causal pathways" arguments typical of classical comparative-historical research in the genre of Weber, Moore, Rokkan and Skocpol. The desire to systematically evaluate the evidence for such arguments is not new (Somers, 1971). But Ragin (1987) is the first to have offered formal procedures for parsimoniously identifying the regularities that underlie a series of case configurations.

Ragin's methods are not "qualitative" in the sense of relying on the interpretive skills of analysts wading knee-deep in thick description. If anything, as Griffin and Ragin (1994, p. 10) have insisted, QCA is more like MR: both apply rules that are independent of the researcher, and both treat cases as "discrete, multiple instances of more general phenomena". While controversial,[42] in principle Ragin's methods have great advantages because of their fidelity to principles of case-oriented analysis. One feature, which is especially valuable in the context of small-n macro-comparisons, but lacking in MR, is visibility of and dialog with the cases. However, the advantages of Ragin's techniques are not exclusive to his methods. My reanalysis of diverse MR-based studies in this paper poses alternatives to both QCA and MR. In closing, I incorporate these suggestions into a summary statement of the major options (other than Ragin's methods) open to quantitative researchers who are troubled by the limitations of MR.

1. *Refinement.* This is the optimistic approach best represented in the present survey by Bruce Western's variant of pooled regression. However, the discovery of a serious limitation of Western's method heightens our pessimism concerning the payoffs from technical refinement. Western was unable to resolve the problem of simultaneously combining and separating cross-country and over-time effects. This is only one issue in MR analysis for which political scientists have sought inspiration from their technically more advanced counterparts in economics and statistics. In this connection it is sobering that G.S. Maddala, one of the most respected figures in the econometric world, considers its achievements both modest and contested. Moreover, he believes that leading political methodologists have mistakenly or misguidedly emulated shallow econometric fads (Maddala, 1998). Sadly, Maddala's criticisms and cautions appear to have fallen on deaf ears.[43] More encouraging is the emerging trend, noted earlier, of efforts to find original econometric solutions to some of the lacunae of MR highlighted in this paper. However it is too

early to predict the fate of these new methods. They are as likely to spark new rounds of technical debate or simply be ignored as to triumph over researchers' customary methodological conservatism.

2. *Triangulation.* This means combining MR with other types of analysis – quantitative, qualitative or both. Hall and Franzese adopted this approach to strengthen their empirical case by citing the convergent findings produced by different ways of researching the same topic. Alternatively, the complementarity of different approaches may rest on the distinctive contributions made by each one of them. This is the strategy underpinning Esping-Andersen's work on welfare states, and several ambitious comparative and historical studies by John Stephens, Evelyn Huber & their collaborators (Rueschemeyer et al., 1992; Huber & Stephens, 2001; see also Huber, Ragin, & Stephens, 1991; Rueschemeyer & Stephens, 1997). They have proposed that comparative research be based on dialog between broad-spectrum quantitative comparisons and historically oriented country studies (see also Esping-Andersen, 1993). The results of MR should be confronted by both theory and knowledge of cases, and if causal anomalies arise they should be put to the test of historical process-tracing across multiple countries.

   This approach is attractive but also very demanding; it is virtually impossible without long-term collaborative research. In practice, when triangulation does occur it is usually more modest than in the hands of Stephens and his collaborators. Occasionally, researchers employ multiple statistical techniques to analyze the same data or problem, looking for convergent results (e.g. the use of both MR and QCA by Kangas, 1994; Ebbinghaus & Visser, 1999). In addition, some book-length studies have utilized both case-studies and pooled regressions, using the qualitative materials either to illustrate their argument (e.g. Boix, 1998) or as a genuine complement to statistical findings (e.g. Swank, 2002).[44] This kind of hybrid analysis is a welcome development, but the insularity of different methodological traditions and the difficulty of publishing multimethod articles in journal format both limit its likely spread.

3. *Substitution*. The present paper has promoted the use of alternative methods of quantitative analysis as another strategy for dealing with the problems of MR. The second and third sections presented tables or tree diagrams in which countries are clearly identified.[45] It was shown that these simple techniques overcome some of the most unattractive limitations of MR while incorporating key elements of the case-oriented approach. They are able to plainly convey complex analytical ideas like elective affinities and causal hierarchies. They also draw attention to cases

deserving of additional, more focused comparative scrutiny, which is a blind spot of most other methods. I have suggested as well that, provided they fit researchers' theoretical assumptions, there is no reason why inductive multivariate statistical methods should not be exploited by comparativists. The utility of factor analysis in clarifying the evidence for Esping-Andersen's approach to welfare state diversity was the illustration offered here,[46] but many other methods of exposing latent variables are available. Such methods hold the delicious promise of turning the traditional handicap of more indicators than cases from a burden into an asset. Of course, generating better measures of the phenomena of interest cannot resolve the difficulties of testing causal explanations in cross-national research. It has been argued here that data analysis aimed at theory testing and theory building should strive to reveal how the cases are located in relation to each other as well as to cause and effect variables.

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NOTES

1. In contrast, interest in formal methods tailored to small-n research is relatively strong in Europe, with an extensive website devoted to the topic (http://www.compasss.org).

2. It is, of course, debatable just how bounded the research universe is or should be. Conventionally, comparative policy studies focus on the approximately 18 rich, capitalist countries with longstanding democratic polities and non-trivial populations. Such conventions may be theoretically arbitrary and should always be open to challenge. Many studies have incorporated Greece, Spain and Portugal after democratization (and more practically, after their inclusion in OECD databases). Other candidates for inclusion in studies of what have until now been known as "the Western nations" might be found in the former Soviet bloc states, Latin America and East Asia. There are good arguments both for and against expanding the universe of comparative studies. For instance, compare Geddes (1990) and Boyer (1997).

3. Even the well-known injunction of Przeworski and Teune (1970) that comparativists should strive to turn the proper names of countries into the abstract names of variables did not entirely contradict this view. It should be remembered that Przeworski and Teune were railing against the dominance of comparative politics by "area studies" specialists and urging their colleagues to avoid particularizing arguments that could easily strait-jacket both theory and comparison. Many contemporary advocates of case-oriented analysis (including Ragin) would have no quarrel with this assessment.

4. The criticism here is not the standard one that quantification over-simplifies complex reality. There is always a trade-off between accuracy and parsimony in social research, whether analysis uses quantitative measures or narrative representations. The point is that the use of MR encourages what may well be a mistaken belief that our measures are precise and continuous.

5. An exception is Amenta and Poulson's (1996) use of MR and QCA in a comparative study of the American states. This exception proves the rule, however, since the measurement of such concepts as "administrative strength" was possible only because this research compared sub-national units of a uniform national entity.

6. More recently, Lieberson and Lynn (2002) have offered a more fundamental critique of the quasi-experimental epistemology prevalent in sociology and similar disciplines.

7. Abbot has offered an elegant formulation of this problem. Variable-oriented approaches "seek to understand the social process by developing linear transformations from a high-dimensional space (of 'main effects' and occasionally of interactions between them) into a single dimension (the dependent variable) … Now this strategy … is useful only if the data space is more or less uniformly filled" (Abbott, 1997, p. 86).

8. I excluded picayune Iceland with only 80,000 potential union members. I also replaced Rothstein's left party representation indicator borrowed from Wilensky (1981) and based on the entire 1919–1979 period which includes disruptions and discontinuities during the interwar years. Since the unionization data reveal that cross-national differentials stabilized after about 1965, I treat the first two postwar decades as the politically formative period. Figures for average left cabinet strength in this period were taken from the dataset assembled by Korpi and Shalev (1980). It turns out that these modifications strengthen the effect of the Ghent variable.

9. Potential membership was dichotomized after exploratory charts revealed that it had an evident threshold effect on unionization. With the exceptions of only Switzerland and the Netherlands, all small countries (no more than 5 million potential members) had more than 50% density, while all the large countries (10 million and up) scored less than 50%. Within these two categories no relationship was discernible between the two variables.

Left strength was grouped into four categories that reflect breaks in its distribution. "None" were cases with zero or trivial (up to Japan's 4%) left party representation in cabinet; "weak" 7–15%; "medium" 22–29% plus an intermediate case (the UK) with 36%; "strong" 45% or more.

10. On the other hand, left strength discriminates only weakly between the unionization rates of small countries, and not at all between the large ones (except perhaps for the British case).

11. It should be pointed out however that although only careful comparative historical research can speak to this type of causal question, as a result of theoretical, evidentiary and interpretive differences there is no guarantee that a consensual account will emerge. On the contrary, a sizable literature relevant to the role of the Ghent system has failed to arrive at clear-cut conclusions. In addition to Rothstein's article, see Hancke (1993), Scruggs (2002), Oskarsson (2003) and Swenson (2002).

12. The significance of these kinds of anomalies for scientific progress has been strongly argued by Rogowski (1995).

13. Visser (1992) has suggested that most of the vast difference between Belgian and Dutch unionization can be attributed to the fact that Dutch unions have no presence in the workplace. The origins of Norway's laggard status are less clear, but they might be traceable to the Norwegian union movement's lesser effectiveness in some of the sectors that grew from the 1960s, when Norway's density plateaued while Sweden's entered a long period of growth. Data collected by D'Agostino (1992) reveal substantial gaps in union density favoring Sweden in the following categories: women, private sector trade and services, and white-collar workers.

14. See http://www-personal.umich.edu/~franzese/h&f_data.TXT

15. The assumption of causal stability over time can be relaxed, but as in Hall and Franzese's study it typically is not. Although Hall and Franzese tested for effects of different data periodicities (annual, decadal or full-period), they did not examine the consistency of their model across sub-periods.

16. Except at the intermediate level of coordination (0.5), where there is only a small difference in CBI between Belgium and the Netherlands. Since the Hall–Franzese model in any case makes no specific prediction for this configuration I do not include it in Table 1.

17. Hall and Franzese included dummy variables for each decade or year in their pooled regressions, but they were not interacted with any of the causal variables.

18. Hall and Franzese's simulation estimated 9.7 percentage points more unemployment at the highest than the lowest levels of CBI in decentralized systems, whereas the simulated gap between the actually existing poles of CBI is only 2.4 points.

19. Goldthorpe recommends even more strongly that researchers widen the "geographical and sociocultural range" of their research. In this matter, however, it cannot be said (as it can of pooling) that the recommended solution is a popular one. As Goldthorpe concedes, data quality and availability are limited outside of the bloc – the OECD countries – which interests his intended audience (and mine). Moreover it is widely understood that what might be called the "specification costs" of going beyond the OECD (additional casual factors and alternative causal paths) usually outweigh the potential benefits. Even in a theoretically developed field (the economics of growth) where it was possible to gather comparable data for a stunning 119 countries, Levine and Renelt (1992) found themselves hopelessly unable to use cross-national regressions to adjudicate between rival theories.

20. In political science, where pooling has been most popular, foundational treatments are Stimson (1985), Sayrs (1989) and Hicks (1994).

21. In Kittel and Winner's (2005, p. 8) pithy summary, "practically all published contributions to comparative political economy using panel data assume poolability by fiat".

22. A compromise that is more sensitive to context but less exhaustive of degrees of freedom, is to permit both intercept and slope parameters to vary across *groups* of nations or years. For a rare example see O'Connell (1994).

23. Western's 1998 article is the published version of a paper dated December 1996 which was circulated electronically (Western, 1996). In the final version a partly different empirical example was substituted for the one in the preprint version (economic growth became the dependent variable instead of unemployment). I refer here to the findings reported in the 1996 version since they highlight a problem, which I believe to be endemic to the technique that Western proposed.

24. ''Unregulated'' labor markets are those in which no more than half of the workforce was covered by collective bargaining. Classification of the other countries was based on Western's dichotomous measure of corporatism. I adopted Western's classification of Switzerland as corporatist even though it had less than 50% collective bargaining coverage.

25. For example, if the time-series coefficients for left cabinet strength are regressed cross-nationally on collective bargaining coverage, the resulting coefficient is 1.00 ($t = 3.4$) for all countries but only 0.59 ($t = 1.5$, non-significant) without Japan and Finland.

26. Western (1996, p. 26) indeed noted that the left government variable for Japan was constant and counseled against ''substantive interpretation'' of the Japanese result. However the statistical generalization yielded by the cross-sectional level of his hierarchical model was clearly based in part on the Japanese case.

27. The debate took place in a special issue of *International Organization*. For a judicious summary, see the contribution by King (2001).

28. For additional wider-ranging critiques of Garrett's study, see Hay (2000) and Moses (2001).

29. Chart 4 is based on averages for the full period of Garrett's investigation (1966–1990) which I calculated using the dataset on his Yale University website (http://pantheon.yale.edu/~gmg8) in August 2000.

30. In a private communication dated March 7, 2001, Garrett concurred that with one temporary and partial exception no country in his dataset with a strong left exhibited weak capital controls, but he argued that out-of-sample experience in the 1990s subsequently vindicated his predictions.

31. Recent research has sought to replicate and/or update Esping-Andersen's decommodification scores. Lyle Scruggs is highly critical of Esping-Andersen's methodology (see his ''Comparative Welfare State Entitlements'' website at http://sp.uconn.edu/~scruggs/wp.htm and Scruggs and Allen (2006)), while Bambra (2004) reports similar results to Esping-Andersen using updated sources.

32. In his more recent work Esping-Andersen (1999) adopted a different variant of MR, multinomial logistic regression. In keeping with the spirit of the regime approach, this technique has the advantage of permitting explanatory weights to vary across different categories of the dependent variable. But in the context of cross-national research of this type, the category-specific coefficients must be estimated on ludicrously small numbers of cases.

33. Both of the standard approaches to clustering – hierarchical and *k*-means – allocate cases to mutually exclusive clusters, although they provide information on how well each case fits its group.

34. For an exception published after Arts and Gelissen's survey see Powell and Barrientos (2004).

35. In addition to the techniques mentioned, other methods of revealing underlying "dimensions" are MDS (multidimensional scaling) and CA (correspondence analysis). These methods are appropriate to ordinal or even nominal data and do not assume linear relationships among variables. Another flexible option, utilized by de Beer, Vrooman, and Wildeboer Schut (2001), is the non-linear version of Principal Components Analysis known in SPSS as PRINCALS. Since the results generated by factor analysis in my original study (Shalev, 1996) are replicated using other methods, they remain the basis for the findings reported here.

36. Hicks and Kenworthy (2003) also advocate a dimensional approach to verifying Esping-Andersen's typology. However, these authors seem to interpret their finding that welfare state indicators reduce to two dimensions as evidence against the existence of three regimes. In contrast, I argue that if Esping-Andersen is correct then policies (again – *not* countries) should follow two underlying continua which provide the coordinates of the three regimes.

37. In view of objections raised by Castles and Mitchell (1992) concerning his coding of Australia and New Zealand, I did not include two of Esping-Andersen's key indicators – "decommodification" and "universalism" (Esping-Andersen, 1990, Tables 2.2, 3.1). The 13 indicators summarized in Chart 4 were obtained as follows; references are to Esping-Andersen (1990): social insurance spending (Table 5.1, source data from the author); number of pension schemes ("Corporatism" in Table 3.1), Civil Servants' pensions ("Etatism" in Table 3.1), benefit equality (Table 3.1); "poor relief" (Table 3.1); the public–private division in health (Table 3.1) and pensions (Table 4.3); "full-employment performance" (Table 5.9, data from the author). Active manpower program expenditures relative to GDP (c. 1975) and public employment as a percentage of total employment (in 1980) are mentioned in Esping-Andersen (1990) and analyzed in Esping-Andersen (1985), but the source data were obtained directly from the author.

38. The findings presented below were originally reported in the introduction to Shalev (1996).

39. Thus the researcher hopes that each item will load high on only one of the factors. The procedure known as factor "rotation" is designed to encourage this to happen, but I opted here for the more pristine test of an unrotated analysis.

40. On the complexity and importance of state traditions as a causal variable in comparative research, see Crouch (1993).

41. The contradictions of the British welfare state are well known, and if anything they are exemplified by the contrasting experiments launched by Thatcher and Blair. On the mixed Dutch case, see Wildeboer Schut, Vrooman, and de Beer (2001).

42. QCA has been vociferously criticized, particularly for its dichotomous measurement of variables and abandonment of probabilistic generalizations in favor of deterministic ones (see especially Lieberson, 1994, 1991; Goldthorpe, 1997). Ragin's "fuzzy logic" technique at least partially answers these criticisms.

43. In quest of evidence for political methodologists' inattention to critiques of pooling, I used the Social Sciences Citation Index to search for articles that cited Maddala (1998). As of July 1, 2005, there were only five citations, two of them authored by political methodologists. In contrast, another article by Maddala

(on unit roots and cointegration) published the same year has been cited more than 100 times.

44. In an intriguing recent contribution, Gordon and Smith (2004) offer a method for introducing qualitative findings into causal statistical models (which however has already given rise to debate; see *Political Analysis*, Vol. 13, No. 3).

45. For an independent application of these techniques, see Marks and Wilson (2000, pp. 445, 450).

46. See also Leertouwer (2002), who used factor analysis to uncover the latent dimensions of corporatism and central bank independence by analyzing a wide range of empirical indicators proposed by previous researchers.

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WHAT'S MULTIPLE REGRESSION GOT TO DO WITH IT?

Lyle Scruggs

Unfortunately, many people like to do their statistical work as they say their prayers – merely substitute in a formula found in a highly respected book. (Hotelling et al., 1948 [cited in Kennedy, 2002*])*

I want to begin by thanking Michael Shalev and the editors for providing a forum for discussing the role of quantitative techniques in comparative social science. My particular interest in this debate comes from two angles. First, though I am not trained as a methodologist, I regularly teach statistics to graduate students. This gives me a certain affinity with the frustrations expressed in his paper concerning the use and abuse of regression analysis. It is hard trying to explain to graduate students that while statistical software is a useful hammer, everything is not, in fact, a nail. It is even more frustrating that they can, with some justification, interject to my proscriptions: "but don't a lot of published papers in our field do that." Second, I have written several papers dealing directly with the examples discussed in his paper, most of them employing multiple regression (MR) techniques.

Let me start by laying out what I basically agree with in the paper. First, regarding multivariate regression:

1. The standard estimators in MR, contain many assumptions that are often not verified by researchers and are often conveniently ignored in the actual research process. This is perhaps most true in the sense that statistical estimates are often (incorrectly) reported on a "sample" that is

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actually a population, with no intent of generalizing beyond that population. It is also true that many linear regression applications are based on data that do not come close to spanning the tested model's parameter space, or, in other cases, are inadequately specified to justify pooling. The operationalization and estimation of MR models should be the last (or at least a late) stage in the development and testing of hypotheses. The earlier stages involve developing a theoretical model, mapping the theoretical model to observables, developing a statistical model of the process generating the observables.

2. There has been a tendency for (easily implemented) techniques to run ahead of and amok in empirical analysis. This is due partly to methodological developments, but is due mostly to cheap computational power and multipurpose software packages. These factors make it very easy to access estimation procedures that, unlike OLS, are arcane knowledge to most practitioners.
3. Because of the first two points, statistical analysis is used atrociously in a lot, if not most, comparative social science. How this state of affairs can come to be in a discipline with peer review is an interesting social science question in itself.

On several points of "causation" I am also in agreement with the paper:

1. Correlation cannot determine causation, nor can it eliminate the possibility that an unspecified alternative explanation explains a particular outcome. That correlation seems to hold either status among practitioners is no doubt a failing of training in statistical methodology, if not in social sciences more broadly. MR can only really confirm that empirical results are consistent with a hypothesis.
2. The effects of particular "forces" are generally contingent on the presence/absence/level of others.
3. Related to 2, there is seldom a single, isolated cause for a phenomenon of interest.

With these things said, I am concerned that this article tends to throw the baby out with the proverbial bathwater, leaving us with nothing in the tub. Regarding causation, my points of agreement are completely consistent with taking a diametrically opposite position to Shalev's with respect to the appropriate methodology for confirming causation.

First of all, almost all of the substantive problems with applying MR that are discussed in the paper are also addressed in basic econometrics texts.[1] Moreover, I think the paper just has it flat wrong about basic aspects of

what regression analysis can do. Most of the mistakes that the paper correctly identifies about how MR is too often conducted are seldom solved, and sometimes made worse, by appealing "case analysis" or "other qualitative techniques" (see Seawright, 2004).

Second, leaving aside critiques of pooling for the moment, a number of the articles singled out for criticism in Shalev's paper: (a) have been criticized on the empirics, (b) make as much of a case for *textbook* MR than any alternative approach, particularly one whose details are not clearly specified or are anyway part of the basic MR toolbox. Finally, one has to ask what is the alternative approach to MR for *evaluating theories?* As I hope to make clear below, the paper's most extended discussion of "alternatives to multiple regression" does not provide anything approaching a basis for establishing a causal relationship between the theoretical variables.

MULTIPLE REGRESSION AND CAUSAL EXPLANATION

The first thing most people learn in statistics is that correlation is not causation, and that inferring causation from statistical results requires that there is a theoretical model (a good reason to think there is a causal effect), not just a statistical one. Usually, this implies a theory with some "mechanisms" that may also be subject to investigation. Except in some quite limited senses of the term, almost no one thinks that any MR results justify a causal claim (Goldthorpe, 2001).

Nonetheless, I can attest from my teaching experience and reviewing manuscripts for scholarly journals that it is common for users of statistics to forget all of this. Why this is so is an interesting question. I have some guesses – e.g., researchers operate in a community that may not know enough about statistics to speak out about inappropriate use; they succumb to the temptation to ignore poor statistical methods when they produce results that seem to support their pet "causes." But these are only guesses.

What I found unclear in the paper is a definition of a cause, and the criteria for stating and establishing one. How attaching names to cases, for example, does anything to resolve the issue of establishing causation is a mystery to me. In later sections of the paper, it seems that this is a means by which one can introduce explanations in an *ad* (*post*?) *hoc* manner, with no recognition that this can easily result in a *unique* configuration of causes for each case. I do not think that is Shalev's intent. I know of no theories that are stated in terms of particular observations or cases.

Shalev rightly criticizes theoretical approaches that start with a dependent variable, add "independent variables" until most variation in the sample is explained, and then claim to have a model of causes. But one would be hard-pressed to find a modern econometrics text that does not reject such an approach.

At various places, Shalev raises the prospect that causal relationships can vary across units and across time in an effort to critique MR approaches. He seems to ignore the fact that unit homogeneity is necessary for *any* verifiable causal explanation in science. One can always claim that an explanation might not *always* hold in *all* places, just as one cannot refute the claim that a cause only "seems" to apply in times and places other than the observed case.

WHAT *CAN* REGRESSION DO?

Consider the following two quotes that are drawn from an early section of the paper. I select them, because I think that they are widely repeated claims against MR in contrast to a case-study method.

"[Case oriented research] assumes from the outset that the effect of any one cause depends on the broader constellation of forces in which it is embedded" (p. 5)

"MR is even more challenged by another causal assumption that flourishes in case-oriented analysis, namely that there may be more than one constellation of causes capable of producing the phenomenon of interest." (p. 5)

These objections are metaphysical ones, in the sense that they really undermine any attempt at explanation or verification in the sciences. The first statement amounts to saying that a case-oriented research *assumes* that any cause cannot be separated from a broader constellation of causes, and implicitly asserts that variable-oriented research assumes that it can be. I find the first assumption inscrutable as a basis for *comparative social science*. If causal forces cannot be isolated from one another and identified across units of comparison, how does one move beyond explaining all differences among cases as due to irreducible differences in the cases themselves.

This causal perspective would seem to imply, for example, that differences in welfare spending are ultimately explained by different "national characters" (understood broadly to include culture, history, and institutions), not by leftist governments, strong unions, or the level of economic development, or some combination of *just* those three factors. If each cause is considered to be embedded in other "forces," we (even the historians among us) should

be required to specify what we think those forces are and how they affect "causes" we are interested in explaining. And these explanations should be subject to some criteria of rejection, which implies a domain beyond a single event.

The second statement amounts to a claim that from the infinite *set* of factors that comprise a "constellation of forces" needed to explain an event, more than one such *set* of conditions may cause the event. This makes *any* causal explanation largely irrefutable. Why does the United States have no socialist party? If my explanation is "because it was a former British colony," identifying some British colonies with socialist parties is not sufficient to refute the causal claim definitively, because those other former colonies are not the United States. Indeed, if we did find a condition (X) that was, empirically, unique to those countries without strong socialist parties, one could still not refute the causal claim that, for the United States, condition X was only operative because the United States was among other things, a former British colony. (The counterfactual would be that condition X would not have precluded the development of a socialist party in the United States, if it had been, say, a French colony.) If nature behaved this way, MR would certainly be humbled, but no less thoroughly than any alternative approach to evaluating causal *regularities*.

CAN REGRESSION DEAL WITH CONJUNCTURAL CAUSATION AND CAUSAL HETEROGENEITY?

The previous section suggested that *any* approach to explanation must specify what is supposed to matter and how it matters. Here, I want to object to a narrower claim that MR cannot really accommodate conjunctural causation and causal heterogeneity. MR *does* require that whatever causal possibilities we posit to exist in theory must be specified and operationalized in an empirical model *beforehand*. But doing that is perfectly compatible with the reality of conjunctural causality and causal heterogeneity.

Conjunctural causation can essentially be accounted for by some type of "interaction term" in a regression model. This would test whether the effect of two things together is greater (or less) than the sum of the parts. In a simple case, one can simply take the interaction as the intersection of two variables. If, for example, having A or B alone is jointly bad for you, but having A and B (together) is good for you, this can be incorporated into an MR model. Interaction terms, particularly dummy-variable interaction

terms, which allow for the effect of a variable to be different to two contexts, i.e., government spending produces inflation in non-corporatist systems, but not in corporatist ones, are standard fare in regression texts. (A related, but more complicated, causal structure amenable to MR is hierarchical models, which Shalev praises later in his paper.)

The fact that a particular regression model fails to include (or consider) interaction possibilities is a theoretical or a model specification problem, not a technical one. While it is convenient to blame this lack of creativity on making students take statistics courses – Shalev cites Abbott's claim that using linear models causes us to think that causal effects are linear (p. 5) – the widespread confusion about conjunctural causation is really an argument why students desperately need more *good* statistical training, not less statistical training.

Shalev suggests that the problem with an interaction specification in MR is that it takes up degrees of freedom. This is a pretty widespread claim about the advantages of case-oriented approach. But how a case approach, which, if anything, leads to a *reduction* in the number of cases analyzed, can more adequately discern the validity of an explanation with one more "moving part" is hard to understand.

It is more often in "substantive" (i.e., case) approaches that one finds much vaguer specifications about the relationships between variables. I can only draw one straight-line curve between points; but I can draw a lot of non-straight curves. So what does it mean to move from a claim that a relationship is "linear" to a claim that it is "non-linear"?[2]

To illustrate how MR deals with conjunctural causation, consider the following example of ten observations (Table 1).

A standard regression model $Y = \mathbf{b0} + \mathbf{b1}A + \mathbf{b2}B$ yields

$$y = -0.9 + 0.5A + 0.5B$$

$$\text{se} \quad (0.57) \quad (0.57)$$

and the overall model explains no variance Y (R^2 is around 0).

Given a theoretical reason (or just a hunch) of conjunctural causation between A and B, we posit a different regression model

Table 1. Data Example 1.

A =	0	0	0	1	1	1	1	1	0	0
B =	1	1	1	0	0	0	1	1	0	0
Y =	−1	−1	−1	−1	−1	−1	1	1	0	0

$Y = \mathbf{b0} + \mathbf{b1}A + \mathbf{b2}B + \mathbf{b3}C$. C is a new variable (A*B) estimating that model with the same sample of data, $Y = 0 + (-1)A + (-1)B + (3)C$, and predicts the data perfectly. Individually, A and B have a negative effect, but jointly, their total effect is positive.

Note that if our hunch arose simply from eyeballing the data (which you can do in this case) and not for some a priori theoretical reason, then one has simply summarized the data. The question of whether that model is good cannot come from mechanically fitting the data.

Causal Heterogeneity

In contrast to the common assertion that MR cannot handle causal heterogeneity, the possibility that different combinations of variable values can produce the same outcome is precisely what MR allows for. Indeed, when I was a graduate student, I learned that one reason for using MR as opposed to simpler, bi-variate regression analysis was that variation in most of the variables that social scientists are interested in is unlikely to have a single cause. Though some of my students do have trouble seeing it at first, a regression estimate produces a predicted value for each case, and it generates predicted values for all possible combination of variables in the model, even if some combinations are not represented by specific cases.[3]

To see this, Table 2 presents another simple set of seven observations.

A and B are both associated with Y. Regressing A and B on Y in the form $Y = \mathbf{b1}A + \mathbf{b2}B$ produces a result $(0.2 + 0.6A + 0.6B)$ that seems odd at first, because it implies that A and B do not perfectly predict Y. (If $A = 1$ and $B = 0$, Y(predicted) = 0.8.) However, knowing that Y only takes a 0 or 1 value, the regular ordinary least squares (OLS) regression model is flawed. You need a logit estimator, which is a relatively minor variation on the OLS technique, and is least introduced in most basic econometrics texts. Estimating these data with a logit model produces a result that perfectly *classifies* all of the cases![4] As for the claim that MR does not distinguish between additive, conditional, or multiple pathways as the causal forces, they are easily obtained from the predicted values of the actual cases.

Table 2. Data Example 2.

A =	1	1	0	0	1	0	0
B =	0	0	1	1	1	0	0
Y =	1	1	1	1	1	0	0

One thing that is sometimes overlooked is that MR approaches (OLS or variants like logit, ordered logit, etc.) can estimate parameters when variables are measured dichotomously (0 or 1) up to continuous measurement. MR approaches are also generally robust to reductions in the number of categories of measurement. Major alternative approaches, like Qualitative Comparative Analysis are only intuitive when the data are dichotomous for all of the variables. Too much may be made of estimation on a "continuum" when the measured concepts are not really so refined. That may be a temptation that MR permits, but it is not a cause of poor measurement.

Spanning Large Parameter Spaces

Shalev is certainly correct when he critiques how many MR studies "span" many empty cells and convey an impression of linear effects that is not really justified. For the relationship displayed in Fig. 1, OLS reports a "statistically significant" regression line, and would predict $Y = 12$ given $X = 13$. That prediction is based on the *assumption* that the relationship is linear, and the data obviously fails to support that assumption. ("More supportive data" for a linear effect would be that the observations $(X,Y) = (9,4)$ and $(15,21)$ were actually, say, $(9,8)$ and $(15,15)$.)

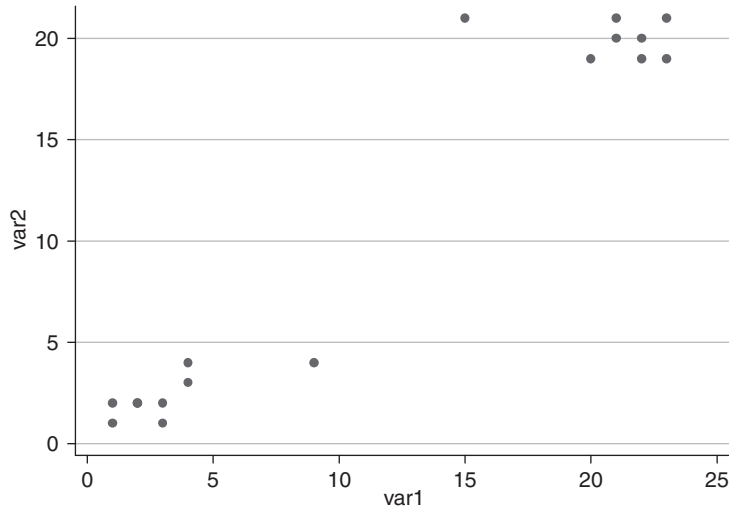

Fig. 1. Spanning Parameter Spaces.

But is this a problem that is particularly likely to plague MR as a technique? One step in developing and evaluating regression models is to examine assumptions about functional form, error distributions, and other so-called residual diagnostics before accepting MR results as genuine. Most basic econometrics texts have sections on residual diagnostics and functional form, and walk through all the basic assumptions of linear models. Econometricians like Leamer and Kennedy, and many econometrics texts, provide fundamentals on how to test the robustness of regression estimates, often in ways that reveal problems that Shalev's paper identifies. It is thus hard to characterize most of these "spanning" problems as unique to MR, let alone a justification for not using MR.

The example in Fig. 1 is a convenient illustration, because the data do follow a binary pattern. There is very obvious break. When the data actually varies more continuously over the range of values, imposing a binary classification on data can make results very sensitive to where one assigns the cut-point. Binary classifications are only simple if the cases are really discreet without many cases "somewhere in-between."

With respect to the capability of regression analysis to identify "problems" in the data, consider the contribution of Lange and Garrett, which Shalev mentions in several places in his paper. Lange and Garrett's initial findings (based on a simple model with an interaction term) were immediately contested Robert Jackman (1987) based on an assessment of the predicted values and errors. Hicks (1988) and Scruggs (2001) also present refined analyses.[5]

What is the solution to avoid spanning large parameter spaces? Why are those middle cells empty? Shalev's suggestion seems to be that cells are empty because there is, in fact, not independence in regressors. Such clustering can show up in MR analyses as correlated independent variables (collinearity). This problem makes it hard for MR to isolate with confidence the effect of any one independent variable, while still *allowing inferences to be made about "joint effects" of several variables*. In other words, if three factors coexist with the dependent variable in most of our sample of cases, MR analysis will show that the *set* of factors is associated with the dependent variable, and that primacy of these factors cannot be disentangled empirically.

More problematic is when there are situations like in Fig. 1. Simple regression can produce misleading results, but proper econometric analysis alerts us to these problems in two ways. First, scatterplots like Fig. 1 will raise a red flag. Second, the residuals from a regression analysis of these data are not normally distributed. Both checks would tell us to be wary of the MR estimates of a simply linear relationship.

Finally, Shalev does not make a real "positive" argument for a case-centered approach being any better in diagnosing or dealing with this kind of problem. Given clustering like Fig. 1, what is the causal explanation? Informed MR diagnoses the problem. But the approach advocated in the paper, like much case-study work, assumes determinism and perfect measurement of concepts. It infers that any residual is thus due to model misspecification. What if the residual is due to a measurement problem? Or due to sampling variation? Or to simple indeterminacy? It would seem that the paper's approach would always result in overfitting the data.

Population

Shalev points out that the data that comparative welfare state researchers use is problematic as a basis of evaluating their empirical models. MR *estimates* are not useful if you know the population values. Assuming determinacy, this might seem to imply that there should be no residuals, and that overfitting is not really possible. But social scientists generally want to be able to use their explanations to *predict.* Some notion of prediction (or counterfactual condition) is implicit in most definitions of causality.[6] This means that the "population" of 18 OECD countries is really a "sample" of outcomes, which we use to create explanatory models that will inform future policy choices or which are consistent with a well-developed theory. While prediction is not necessary for an explanation to be correct, there are many conceivable explanations of a given phenomenon. This makes any explanation's "predictive" power a good basis for parsing among competing explanations.

Shalev's discussion about this problem is unclear to me. On page 11, he cites Freedman and Leamer to the effect that hypothesis testing requires well-developed theory and data that has not been used to create the model in the first place. He then cites Ragin's claim that data and theory are in a constant dialog, and infers that Freedman and Leamer plus Ragin implies that we can, in fact, only count on MR as a way to summarize data, not to test hypotheses.

I think this totally misconstrues Ragin and Leamer and Freedman. MR can never simply be used to "summarize" relationships. The "product" of a model is valid to the extent that it can explain data that is independently derived. Leamer and Freedman (and, once again, many basic econometrics texts) do not promote "purist" notions of separating theory and data. What they suggest (also see de Marchi, 2006; Granger, 1999; Kennedy, 2002) is

that researchers who want to use particular data to assist in constructing an explanatory model should not use the fit of the model to those same data as a test of the model. Instead, researchers should test the model on new data. In practice, this calls for a strategy of (a) dividing your dataset into "model building" and "model testing" subsets, or (b) following an approach that looks for other observable implications of a model and testing those other "observable implications" of the theory (King, Keohane, & Verba, 1995).

COMMENTS ON SPECIFIC EXAMPLES

In the rest of this commentary, I briefly discuss specific examples mentioned at length in Shalev's paper. Where he invokes the importance of paying attention to specific proper names in resolving issues of causation, I submit that this is not a fruitful line of attack. First, a careful analysis of residuals from a conventional MR procedure is adequate to uncover many of the problematic results he points out. Second, there is no attempt in the paper to evaluate competing explanations that are both consistent with the data at hand and validated by new data (such as data for the same countries later in time or for a different set of countries). In principle, I would have no objection to the idea that knowing which specific cases are "outliers" can help to generate new and meaningful explanations. However, if one accepts that there is not complete determinism, or that there is measurement error between a concept and what is observable, outliers can represent the "white noise" inherent in any variation that we want to explain.

The Ghent System, MR and Causation

I am unsure why Shalev suggests that the Ghent unionization relationship is undertheorized. The papers cited in this section (and others) have evaluated a variety of causal mechanisms, and, while all make strong claims for an independent effect of a Ghent system on the rate of unionization, none claims that the Ghent system explains all variation in union density. The essence of his claim seems to be that the only way to prove a Ghent causal effect is to demonstrate a case in which all other causes are "turned off."

This seems to be a wild goose chase. If one actually could demonstrate it for the three explanations offered in Shalev's paper, one could bring other explanations into the fray. Shalev mentions the importance of a union's access to the workplace, for example, to account for differences in union

density in Belgium (a quasi-Ghent country) and the Netherlands (a non-Ghent country). He fails to point out, however, that the workplace access condition fails to explain the difference in union density in Norway and Sweden. (Of course, if you invoked "causal heterogeneity," this inconsistency is not a problem: each case could be allowed to have its own unique cause of its particular high or low density. But, comparative analysis would then seem irrelevant.

If Canada or Germany were to adopt a Ghent system, would they experience an increase in unionization? Shalev's argument suggests not, because he maintains that density is caused by a *combination* of three factors – small size, left governments, and Ghent – and Canada and Germany lack all three. The prediction from the MR model predict that adding Ghent institutions alone would raise density in Canada and Germany 20–30 points. I would wager that density would go up a lot if Canada switched to a Ghent system, but maintained its large size and less "leftist" governments.

Hall and Franzese

In the section on the Ghent system, Shalev collapsed continuous variables in a dichotomy to suggest a conjunctural type of causation. Here, he criticizes Hall and Franzese for doing just that, and suggests that, if they had used a more fine-grained measurement in their key explanatory variables, their results disappear. But perhaps the most important issues discussed in this section are pooling and the appeal to specific names in comparative analysis.

The first quibble that I have with this section is that there is no need to appeal to specific cases to demonstrate the results Shalev shows in his Chart 2. If one removes the names of the countries, Hall and Franzese's results still fall apart.

With respect to pooling, Shalev points out a common (and often untenable) assumption in such analyses that causal processes are the same in different time periods. This objection, of course, is not necessarily a temporal one – causal relationships may vary across time, across groups of countries, across configurations of space time, and across combinations of any variables. It is, in fact, impossible to count the number of alternative scenarios of variable causality. But this goes back to my initial discussion of causation. We might as well throw up our hands.

I think the more valid objections to pooling are based on the fact that pooling is quite often done by researchers interested simply in explaining cross-national variations, and that it is done with little realization that

adding observations does not necessarily add information that is (as assumed) independent of cross-sectional variation.

Shalev identifies several specific countries as "driving" Hall and Franzese's results. Knowing these cases, he then adds a new variable into the explanation. This approach seems like an exercise in "ad hoc'ism". Is the new explanation actually measured for all other cases and the model's results re-evaluated? Is this not just the type of "add variables until the R^2 approaches 1" approach to MR that is almost universally condemned? Finally, contrary to the admonitions of MR econometricians like Freedman and Leamer, the paper does not attempt to evaluate the implications of these added variables in a "more complete" model of political outcomes using new data (or observable implications of the model). Like Ptolemy's epicycles, this approach adds something that accounts for an empirical discrepancy, but that does not make it the most appealing causal explanation.

Esping-Andersen

Finally, I turn to Shalev's factor analysis of Esping-Andersen's data regarding welfare state regimes. Having recently spent several years trying to independently replicate the data that form the basis of Esping-Andersen's path-breaking book, I am not convinced that this example is very informative.[7] Leaving aside the issue of the validity of the reported measurements, what does the clustering Shalev provides actually represent? By excluding the decommodification index from his analysis, Shalev excluded perhaps half of the empirical basis of the "three worlds" typology.[8] Almost half of the indicators of "worlds of welfare" (6 of 13) that are included in the factor analysis deal with the structure of the old age pension system, obviously an important element of the welfare state, but hardly one that leaps out from the "worlds of welfare" narrative.

Second, it is taken as axiomatic that the underlying measures (and the way that they coalesce) are valid measures of some underlying concepts that differentiate the three regimes, yet the concept validity for most of these indicators is not really discussed in the original source or here. (Admittedly, this is more of an argument about the appropriateness of the example than anything Shalev does in the paper.)

I will close with one example of what I mean here. It is motivated by specific knowledge of programs and of cases, yet it reveals why it is so often *measurement*, not just theory or methodology, that matters. Is it plausible that civil service pension spending is not correlated with (i.e., loads on the

same factor as) public employment? It would seem that countries with lots of public employees must have big civil service pension bills. Chart 5 in Shalev's paper clearly shows this is not true for Esping-Andersen's data. Are civil servants just especially lavishly treated under "statist" and not lavishly treated in "social democratic" regimes? No. The terms of civil servant pensions are quite generous in every social democratic regime that I am aware of.

There are two reasons for low civil servant pension spending *as measured here*, both quite unrelated to the "Three Regimes" story. First, the expansion of the public sector is comparatively recent in social democracies, so the full fiscal impact of the state pension commitment (but not the commitment itself) is not manifest in civil servant spending in 1980, when the Three Worlds data is collected. Second, the civil servant pension system is a separate occupational pillar in statist countries, e.g., Germany and France, while civil servant pension spending is merely a (generous) top-up to the universal benefits offered in social democracies. In other words, the differences in civil servants pension spending in Germany and Sweden have little to do with what civil servants expect to get in the two countries and mostly to do with mundane accounting.

NOTES

1. I admit that I have not undertaken an exhaustive survey of these texts. Most of what I say here refers to several texts in economics that I have used in the past and which are quite popular. (They have been published in numerous editions.) They are Gujarati (2003), *Basic Econometrics 4*th *edition*, Kennedy (2003), *A Guide to Econometrics 5*th *edition*, and *Undergraduate Econometrics 2*nd *edition* by Hill, Judge, and Griffiths (2001).

2. To illustrate the problem, with $n = 2$, variation in X perfectly explains the variation in Y (i.e., $R^2 = 1.00$). With $n = 3$, variation in X perfectly explains the variation in Y if my model is $Y = b1X + b2X^2$; with $n = 4$, $R^2 = 1$ with $Y = b1X + b2X^2 + b3X^3$; and so on. All except the first are "non-linear" relationships between X and Y. Thus, for all X–Y relationships, there is *some* non-linear specification of X that perfectly explains the co-variation between X and Y.

3. Of course, some of these hypothetical values – outside of the range of observed X's – are often absurd. But most econometrics texts tell you so and suggest problems with predictions for cases outside of the range of observed Xs.

4. It is also possible to use OLS to test this relationship (again ignoring the identity of cases) if one hypothesizes that A or B may explain Y, and that A and B could occur jointly. Simply specify $Y = \mathbf{b1}A + \mathbf{b2}B + \mathbf{b3}A*B$, with the expectation that $b1 = b2 = 1$ and $b3 = -1$. This implies that when A or B = 1, Y is hypothesized to be $1(1) + 1(0) + (-1)(1*0) = 1(0) + 1(1) + (-1)(0*1) = 1$, and when A and B are both 1, Y also is expected to be 1: $1(1) + 1(1) + (-)1(1*1) = 1$.

5. Furthermore, the pooled model in Alvarez et al. was shown to be pretty limited once flaws in the estimating methodology were corrected. Only one of the three significant findings was exonerated.

6. It is sometimes said that one might also want some inherent variance to "leave room" for human agency. The problem for this in social science is that the effect of human agency is something that we very much want to explain.

7. See Scruggs and Allan (2006a, 2006b). Simply put, in replicating the decommodification and stratification indices we found some major inconsistencies in the scoring provided in *Three Worlds*, all of which seem to "interpret" the data in a manner supporting the theoretical structure. For example, scoring "rubrics" appeared to be ignored whenever they would produce results seemed not to "fit" the "three regime" framework. As for close knowledge of the cases, this seemed quite skewed toward familiarity of the Nordic countries, and usually to the detriment of, for example, non-European cases. On this score, due to suspicions about the underlying data (not an error on Shalev's part), the results in this section of his paper may not particularly reliable.

8. How the antipodes are treated in the decommodification index could have been easily corrected to make it consistent with Castles and Mitchell's objections.

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METHODS IN COMPARATIVE POLITICAL ECONOMY

Jonas Pontusson

Michael Shalev's provocative essay deserves the attention of quantitatively oriented students of comparative political economy. I agree with many of the points that Shalev makes, but I disagree with the basic thrust of his discussion. I wish that Shalev had written a paper that identified the pitfalls of uncritically applying standard regression techniques in comparative political economy and then explored various ways that these pitfalls have been or might be avoided. The paper that Shalev actually wrote contains elements of the paper that I wish he had written, but these elements seem out of place, for the bottom line of Shalev's paper is that multiple regression should not be employed by comparative political economists (and, presumably, anyone else engaged in comparison of "macro social units"). The implication of Shalev's discussion seems to be that the regression-based comparative political literature of the last 10–15 years has yielded very little, if anything, by way of new empirical and analytical insights. That strike me as far too harsh and sweeping a claim. Backing off that claim, as I imagine that Shalev would want to do, implies some recognition that multiple regression may be useful, at least in certain forms and for certain purposes.

For Shalev, there are two basic reasons why multiple regression (henceforth MR) is an inappropriate methodology for our field of inquiry. The first reason is a pragmatic one: we simply do not have a sufficient number of observations at our disposal to do MR properly. The second reason has to

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do with causal complexity: estimating marginal effects based on a linear and additive conception of causality, MR does not provide an appropriate means to test the kinds of theories that animate comparative political economy. Shalev's second reason for rejecting MR is logically prior to the first reason in the sense that the "small-N problem" is moot if MR is fundamentally inappropriate from a theoretical point of view.

My commentary will focus on the fit between theory and methodology, but let me begin with a preliminary point about the "small-N problem." Much of Shalev's discussion seems to presume that comparative political economists are more or less exclusively concerned with between-country differences in institutions, policies and outcomes. If this is correct, we do indeed have a serious "small-N problem" and pooling cross-section and time-series observations does not constitute a defensible solution to the problem. But is Shalev right in his (often implicit) characterization of what "comparative political economy" is all about? As I will indicate in the course of the following discussion, I think that comparative political economists, regardless of whether they primarily employ quantitative or qualitative methods, should be and have increasingly become interested in explaining change over time and other forms of "within-country variation" as well as "between-country variation."

Turning to the fit between theory and methodology, is it really the case that regression analysis assumes a linear-additive conception of causality? Some of Shalev's general formulations read as if the quantitative comparative political economy literature consisted entirely of empirical models designed to identify the linear effects of each independent variable in serial fashion, but this is surely not the dominant style of analysis in the literature of the last 10–15 years. In fact, testing conditional causal arguments is a key feature of several of the works that Shalev scrutinizes and criticizes. While Hall and Franzese (1998) seek to demonstrate that the effects of central bank independence are conditioned by wage-bargaining coordination, Garrett's (1998) central argument posits that partisan responses to globalization are conditioned by labor encompassment, and Western's (1998) analysis is designed to show that short-term macro-economic effects of changes in government partisanship depend on the institutional constellation regulating labor markets. Shalev may be right that the execution of these analyses is flawed, but the flaws that he identifies do not seem to derive from assuming linear-additive causality.

I agree with Shalev that the kind of variable-specific interaction models pioneered by Garrett and Lange (Alvarez, Geoffrey, & Lange, 1991) do not fully capture the idea of "causal syndromes" and that this idea is indeed

central to much theorizing in comparative political economy, notably the typological approaches of Esping-Andersen (1990) and Hall and Soskice (2001). The typological tradition does not conceive clusters of countries simply as "bands" in the distribution of discrete variables, with relationships between variables being constant across clusters. Rather, this literature suggests that causal effects, not just the values that causal variables take on, should vary across clusters in systematic ways. As Rueda and Pontusson (2000) illustrate, such propositions can be tested within the framework of MR; indeed, I fail to see how else they might be tested (rather than simply being assumed). Pooling cross-section and time-series observations for 16 OECD countries, Rueda and I seek to ascertain whether the determinants of wage inequality are distinctly different in "liberal market economies" and "social market economies" by interacting dummy variables for each of these political-economy types with all the independent variables included in their model. While certain variables (e.g., union density) turn out to have essentially the same effects in both clusters, other variables (e.g., government partisanship) operate differently depending on the broader institutional configuration.

Even more so than variable-specific interaction models, the "syndrome-probing" interaction models estimated by Western (1998) as well as Rueda and Pontusson (2000) presuppose a relatively large number of observations. Shalev's objections to this approach seem to hinge entirely on his objections to pooling cross-section and time-series observations. Shalev points out that pooling entails a number of technical estimation issues, pertaining, in the first instance, to the potential for serial correlation and heteroskedasticity. I have neither the space nor the competence to sort out these issues, on which there is no clear consensus among methodologists.[1] Let me simply say that it clearly behooves practitioners of pooled MR to compare (and report) the results of models with different technical specifications. This has indeed become increasingly common practice in the quantitative comparative political economy literature.

Shalev's main objection to pooling is a substantive one: that pooling ignores the different causal structures underlying cross-sectional and time-series variation. There is a curious dualism at work in Shalev's argumentation on this score. Surely, we cannot be satisfied with observing that one set of variables are associated with cross-national variation on some outcome while an entirely different set of variables are associated with change in the same outcome over time. There are undoubtedly cyclical processes involved in time-series data that do not "add up" to level differences between countries (as Shalev notes, for instance, temporal fluctuations in

strike activity are associated with economic cycles). But this logic does not work the other way: if we believe that government partisanship is a cause of cross-national differences in levels of social spending, then we must also believe that government partisanship affects changes in social spending in ways that do add up. In other words, time-series variation is just as relevant to the proposition that government partisanship matters as cross-sectional variation.

I hasten to add that I think that Shalev is absolutely right in emphasizing that causal dynamics are likely to vary over time – in other words, that we should not assume, as many practitioners of pooled MR do, that the causal effects of any given X variable are constant over the time period covered by our data. Like the question of whether clusters of countries partake in different causal syndromes, the question of causal heterogeneity over time can be fruitfully explored within an MR framework. One obvious way do so is to estimate separate regression coefficients for different periods within our dataset. My favorite version of this approach is moving windows analysis, in which the same regression model is re-estimated for consecutive fixed time periods (dropping the earliest year and adding a more recent year to each new window). The beauty of this simple technique is that it allows us to track changes in causal effects over time and thus avoid the problem of arbitrary periodization.[2]

Invoking the authority of statistician David Freedman, Shalev urges practitioners of MR to concede that "the most which can legitimately be done with MR is […] to summarize multivariate datasets" (p. 11). Though Shalev does not elaborate much, the basic argument to which he alludes here is familiar and widely accepted, at least in theory, by methodologists and MR practitioners. Simply put, the regression coefficients that we obtain by estimating some regression model tell us about the statistical association between two variables, but not really about the causal relationship between them. MR is essentially a more complicated form of correlational analysis. Our estimate of the association between Y and X_1 takes into account the associations between Y and other Xs included in the model (reducing the probability that the association between Y and X_1 is spurious), but does not shed light on the causal mechanisms behind the association between Y and X_1 (or even the direction of causality). Hence we should not think of regression coefficients as doing the explaining; they themselves must be explained. As methodologists constantly remind us, regression results make little sense without a well-specified causal theory. Beyond this, I would also argue that regression analysis should be complemented by in-depth case studies that probe causal mechanisms by analyzing the sequencing of

changes in the variables of interest as well as political processes and the motivations of political actors.

Are the alternative (''low-tech'') methods of quantitative analysis proposed by Shalev any more immune to the objection that ''correlation does not equal causation'' than standard regression methods? I fail to see a compelling argument why this should be so in Shalev's paper. Rather, Shalev's argument seems to be that these methods invite and can be more easily integrated with case studies. By retaining ''named cases'' (i.e., the proper names of countries), they allow us to identify anomalies as well as paired comparisons that deserve further exploration. This advantage must be weighed against an obvious disadvantage illustrated by Shalev's own examples: Shalev's techniques only work well with two or three explanatory variables and, with three explanatory variables, the interaction effects among these variables become quite opaque.

It is undoubtedly true that ''complicated methods often move us away from looking at and thinking about the data'' (Beck & Katz, 1996, p. 31, cited by Shalev, p. 33). The need to explore and present patterns in the data rather than simply reporting regression coefficients has become a common theme among methodologists in recent years and political-economy practitioners of MR will hopefully follow suit. I firmly believe in using tree diagrams, scatterplots and cross-tabulations of data to complement and illustrate the results of regression analyses. Like Shalev, I also believe that such techniques are useful for the purpose of building (or improving on) our theoretical models. Most obviously, identifying anomalous cases might (should) lead us to add new variables to the original model. Case visibility is essential to this step in the theory-building process, but the ultimate goal remains to ''substitute variable names for proper names'' (Przeworski & Teune, 1970).

For certain expository purposes, I would be quite content to stay away from regression analysis altogether (cf. Pontusson, 2005), but I do believe that regression analysis has been and remains a necessary component of advancing the comparative political economy project. If our goal is to ascertain how government partisanship or some other variable of interest affects some outcome such as unemployment rates or growth rates, social spending, unionization, poverty rates or other measures of income distribution – to mention the most obvious concerns of the literature that Shalev reviews – we must surely control for the effects of economic and demographic structures. Even if regression results constitute ''mere summaries'' of patterns in the data, these are arguably better summaries than those yielded by Shalev's alternative techniques in the sense that they provide

more accurate estimates of the "statistical associations" to be explained. The need to control for the effects of several (many) variables that are causally relevant would seem to constitute a compelling reason for sacrificing visible, properly named, cases at some point in the process of data analysis.

Shalev may be right that comparative political economists initially turned to pooling without any substantive interest in over-time variation, viewing pooling simply as a means to analyze cross-section variation with a larger dataset, but this is less obviously true for more recent work. Arguably, the practice of pooling has itself generated an increased interest in modeling dynamics of change among quantitatively oriented comparative political economists. Certainly, real-world developments have brought the challenge of explaining changes in institutions and policies to the fore.

Shalev asks, "Is pooling a panacea?" His negative answer may be a useful antidote to the current pooling fad, but the question does not strike me as particularly interesting. After all, we all know that there are no methodological panaceas! Leaving the well-known limitations of case studies aside, let me mention here that I worry about the qualitative tradition of comparative political economy becoming impoverished. It seems to me that as case-oriented scholars have become increasingly interested in making broad comparative arguments, their "cases" have often become increasingly superficial in the sense that they are treated as single observations on some outcome variable and on a series of potential causal variables. More or less explicitly relying on Millian logic, many comparative case studies seem to reject certain explanatory arguments and embrace others simply by matching causal variables with outcomes across country cases. The conception of causality underlying such work is often strikingly similar to the linear-additive conception that informs simple-minded regression models, but with a highly deterministic twist (cf. Lieberson, 1992). As suggested above, I prefer case studies that explore causal processes and historical sequencing, treating each case as multiple observations of the variables of interest (see Swenson, 2002 and Thelen, 2004, for prominent recent examples). In my view, these are the kinds of case studies that are needed to complement regression analysis and to generate new analytical insights.[3]

It should also be noted that the quantitative political economy literature has recently begun to engage with individual-level data on economic insecurity, income, skills, social policy preferences and political behavior. The most developed strand of this new literature seeks to explore micro-foundational arguments of the earlier "macro" literature on globalization, deindustrialization and the welfare state (e.g., Iversen & Soskice, 2001). Another promising avenue in this vein is to exploit household-level data

from the Luxembourg Income Study to explore the determinants of the distribution of market income and the redistributive effects of the welfare state. While Shalev considers regression analysis to be entirely appropriate for the purpose of analyzing individual-level data, the position he adopts seems to preclude the next step: to incorporate macro-level variables into such analyses by way of hierarchical modeling (e.g., Anderson & Pontusson, 2005).

Nested or hierarchical modeling upholds the promise not only of integrating individual-level and country-level data, but also of addressing the question of why causal effects (or "statistical associations") vary across time or across clusters of countries. In the simplest version of this approach, sufficient to illustrate the logic involved, the coefficients generated by country-specific time-series models are treated as the "dependent variable" in a second cross-sectional model (e.g., Griffin, O'Connell, & McCammon, 1989). To be sure, the second-stage results still beg the question of causality, but this type of analysis does shed some light on "the structure of causality."

Finally, I would like to briefly comment on Shalev's argument that MR is inappropriate for comparative political economy because MR deals with marginal effects and presupposes theoretical precision. Is not MR actually an ideal method for testing imprecise theories? Most current theories in comparative political economy are probabilistic and might best be operationalized as "more of X will be associated with more of Y." With pooling, MR readily allows us to explore threshold effects or other non-linear direct effects. In my view, the paucity of empirical models that depart from the assumption of linear direct effects derives from the limitations of our current theories rather than methodological limitations.[4]

To sum up, I am in complete agreement with Shalev about the desirability of exploring causal syndromes that (may) vary across clusters of countries as well as variable-specific interaction effects. I agree that practitioners of pooled MR should be concerned with over-time heterogeneity in causal effects, and that we should pay more attention to historical dynamics in our theorizing. We should also be concerned about "limited diversity" and more technical issues pertaining to serial correlation and heteroskedasticity. We should not pool unless we have significant variation in the time-series observations on variables that we care about. And we should strive to retain visible cases for the purpose of theory-building as well as the exposition of theory and empirical results.

Shalev's paper is highly instructive, but fails to make the case that MR is an inappropriate methodology in comparative political economy. As suggested above, MR is a useful framework in which to explore some of the

methodological issues that Shalev raises. Rather than treating them as substitutes for MR, it might be more fruitful to conceive the "low-tech" quantitative methods advocated by Shalev as a bridge between MR and theoretically informed, process-oriented case studies.

ACKNOWLEDGMENT

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NOTES

1. Space also prevents me from engaging Shalev's discussion of "limited diversity" or, in other words, the problem of "empty cells." One quick and simple comment: I agree with Shalev that simulations of substantive effects should be based on reasonable ("within-sample") observations of the independent variables of interest.

2. Kwon and Pontusson (2005) use moving-windows analysis to estimate time-varying effects of government partisanship on social spending growth over the period 1962–2000. Our results indicate that Left governments were no more spending-prone than Right governments in the 1960s, but became significantly more spending-prone in the course of the 1970s and 1980s and that partisan effects declined sharply in the course of the 1990s. The results for the 1970s and 1980s come as good news to those who believe that government partisanship matters to the size of the welfare state over the long run. As Shalev notes (p. 30), previous literature that is not sensitive to temporal heterogeneity suggests that "political partisanship loses its explanatory efficacy once the design shifts from explaining levels to explaining dynamics."

3. Ragin's (1987) Qualitative Comparative Analysis provides a means to capture conditional causality based on case studies, but his approach is not sensitive to historical dynamics.

4. Illustrating this point nicely, Olson's (1982) encompassment thesis has inspired several models that estimate non-linear effects of labor-market institutions (e.g., Garrett & Way, 1999).

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MULTIPLE REGRESSION IN SMALL-N COMPARISONS

Gosta Esping-Andersen

INTRODUCTION

Michael Shalev has turned his attention, once again, to the bad methodological habits that social scientists – like myself – often adopt. As always, he presents us with thoughtful, rigorous, and penetrating criticism, but also with a generous dose of constructive prescription. His target is the widespread use of regression techniques in cross-national comparative research. The gist of the argument is that multiple regression (MR) is a far too blunt instrument if our aim is to arrive at a robust identification of crucial causal mechanisms. MR, as he puts it (p. 42), renders the cases invisible and, hence, precludes researchers from having any dialogue with them. The case becomes a set of scores; the causal mechanisms are reduced to correlation coefficients. As a result, analytical power is sacrificed rather than gained. Shalev advocates simpler 'low-tech' approaches such as tabular representations, tree diagrams, or clustering techniques either as substitutes for, or as companions to, regression analysis.

It is almost impossible not to agree with Shalev. As one of the three main targets of his paper, my *Three Worlds of Welfare Capitalism* analyses are, I am happy to see, not completely torn to shreds. The distinctiveness of welfare regimes more or less remains when subjected to alternative treatments, such as Shalev's factor analytical approach. I am more than ready to

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concede that my use of MR to explain welfare regime differences was rather inappropriate for the purpose at hand. I am now older and perhaps also wiser, and would certainly have done it all differently today. But would I now follow Shalev's prescriptions? Yes and no. I am in full agreement that triangulation, i.e. combining MR with qualitative inspection, should be a favoured approach in small-N comparisons. I am less persuaded with his call for *substituting* regressions with more qualitative, lower-tech alternatives. Neither am I convinced that substituting MR with factor analysis (as Shalev does in his reanalysis of my data) will yield more analytical insight compared to scrutinizing residual plots from MR.

MR estimation on small-N country samples implies that we easily violate basic key assumptions, such as monotonic linear effects, statistical independence, the absence of selection bias, and conditional independence. Small-N regressions are therefore not very useful – and easily counterproductive – if used primarily to identify the strength of the statistical relationship. But all this does not mean that we should abandon MR.

Below I shall argue two major points. Firstly if MR is utilized as a diagnostic tool, explicitly aimed at detecting such violations, it provides, in my view, unrivalled potential for identification. Secondly, the 'low-tech' alternatives that Shalev espouses are not superior with regard to distinguishing wrong from correct causal mechanisms, in particular under conditions of selection and endogeneity.[1] My view is that we should use MR not to identify causal mechanisms via the βs, but rather as a 'Popperian' devise. The strength of a statistical association will not tell us much about the real causal mechanisms at work, but the diagnositics that we can obtain from MR residual plots are a minefield of information, truly powerful instruments for fine-tuning and possibly correcting our hypotheses, and subsequently for selecting appropriate alternative instruments. If our true aim is identification (following Manski, 1995), we should not throw MR out with the bathwater.

IDENTIFICATION WITH MULTIPLE REGRESSION IN SMALL-N COMPARISONS

We very often face important macro-level questions that cannot be answered. We usually have few cases but many rival explanations. We easily confound nation charactersitics with the dimensions we measure and, hence, it is basically unclear what explains what. The explicit aim of the 'politics

matter' literature is to demonstrate that left power (x) matters for welfare state development (y), conditional on a vector (z) of other plausible factors (such as economic growth). The standard approach is to sample the 20-odd OECD democracies and then regress the $y = f(x|z)$.

As Fearon (1991) insists, the smaller the sample size, the greater is the need to make counterfactuals explicit. In our sample we will observe Italy's welfare state size, and that Italy was ruled by Christian Democrats throughout the post-war era. The obvious counterfactual is that its welfare state would have been 'bigger' or 'better' had it been ruled by social democrats. In other words, our sample needs to include another Italy, a country that matches Italy on all relevant z values but differs on x. No such country is likely to be found in the 20-odd OECD sample and we are therefore left with no cell-match. When we add to this that small-N studies make it impossible to condition on all relevant z variables, true causal identification is for all practical purposes stifled.

Furthermore, as Shalev also argues, the choice of OLS regressions implies that we assume monotonic linear effects. Sweden is always the top-scorer on left power *cum* welfare statism. If MR gives us an $x\beta$ estimate of 0.3, we are then led to believe that a 5-point increase in left power (Denmark closes the gap with Sweden) will result in a 1.5-point increase in the Danish welfare state size. For Germany, the equivalent effect would be a 4.2-point increase. This is pretty much a non-sensical estimation and is, besides, not what the researcher should aim to identify. I readily admit my guilt in falling into this regression-trap on more than one occasion.

What we truly aim to uncover are the precise causal mechanisms that link x to y. Deep historical scrutiny of all the countries will, no doubt, help the researcher identify how, exactly, left power in Denmark influenced welfare state growth. Doing this rigorously for 20-odd countries would amount to a lifelong project. The reason that I support Shalev's call for triangulation is that MR can be employed very productively in the pursuit of more precise identification – in particular when aided by explicit and systematic use of counterfactuals.

The really valuable information in MR lies in the residual plots, not in the βs and R^2. Small N's are frustrating, but they do have the advantage that scrutiny of the residuals is easy: you can quickly put a name on each point. In this sense, Shalev errs when he claims that MR impedes dialogue with the cases. There are three key issues related to identification where good diagnostic use of MR can become a major asset: dependence among the observations, selection, and endogeneity.

INDEPENDENCE

If our observations are not fully independent of one another, we will violate a basic MR assumption. This will show up as heteroskedasticity in the residual behaviour. Dependency is theoretically interesting because it suggests that some cases follow a similar logic by way of, for example, mutually influencing each other. In time series analysis the logic is similar. If last year's values influence next year's we have some evidence in favour of a path-dependency hypothesis. Frank Castles (1993) took dependency to its logical conclusion in his *families of nations* argument. Many MR practitioners simply do not bother about heteroskedasticity. My *Three Worlds* study was premised on the idea of clustered regime logics and I should, therefore, have actively tested for independency.

There are two options if the assumption is violated. One can correct for it via country-group dummies (say a Scandinavia dummy). If Castles is right and there are four families, the dummy solution results in paralysis because it will exhaust just about all degrees of freedom. More to the point, regressing with 'family dummies' will not get us much closer to identifying real causal mechanisms. The second and much more alluring option is to launch an in-depth study (as Castles did) of *why* or *how* diffusion came about – one example of why triangulation via MR can be scientifically fertile. Had I seized upon this opportunity I would probably have paid far more attention to whether regimes emerge from similar behaviour on x or from a policy diffusion process that is unrelated to x. My thesis would clearly have encountered problems were the latter true.

When we regress welfare state size on left power we will inevitably identify a cluster that 'overshoots'. Putting names to the dots tells you immediately that they are countries with a strong Christian democratic tradition. Van Kersbergen (1995) noted this and subsequently conducted an in-depth examination of similarities and differences in the evolution of Christian Democratic welfare states. Here is another telling illustration of how dependency diagnosis plus qualitative analysis can yield good sociological research.

New countries are spawned from old ones almost on a yearly basis, and there are undoubtedly many MR practitioners that see this as a welcome addition of N's. United Nations membership has leapt by 50 percent in the past decade with the birth of new nations. One should, of course, not assume that the new Slovakia and Slovenia are statistically independent from the old Czechoslovakia and Yugoslavia. We might also ask ourselves whether intensified EU integration has diminished the degree of independence that once existed between, say, Finland and France. Some clues may be found in the MR residual plot.

SELECTION AND ENDOGENEITY

Our main challenge is to distinguish true from spurious relationships. Our inferences will be seriously biased if *y and x* are both the outcome of some, possibly unobservable, heterogeneity or if x is not truly exogenously determined. Selection bias and endogeneity are essentially two facets of a similar problem, namely that if they are present we will make incorrect conclusions regarding the causal mechanisms we care about. Using welfare state research again as illustration, it is very possible that strong social democracy *and* large welfare states are jointly determined by some unidentified factor that, perhaps, lies deeply buried in history. Take Sweden: the seemingly obvious connection between left power and welfare state growth may, in reality, be incorrectly identified. It is theoretically equally possible that both attributes of modern Sweden have their roots in any number of historical peculiarities, be it patterns of landholding in pre-industrial ages, the nature of absolutism, industrial structure, or the transition to democracy. We must, likewise, assume that the welfare state – once in place – will have had substantial influence on the social democrats' electoral fortunes, both in the short and long run. If so, the x for Sweden is influenced by y and the assumption of conditional independence is violated.

Selection and endogeneity are often difficult to detect and manage. The simpler methodologies that Shalev advocates are, as far as I can see, not better equipped to handle either, at least when compared to MR.

Selection bias may be related to observables or unobservables (Heckman, 1988). The former occurs when the expected covariance $E(u_j u|z) \neq 0$, but it disappears once we control for the observed variables Z, so that $E(u_j u|z) = 0$. The latter is present when $E(u_j u) \neq 0$ and $E(u_j u|z) \neq 0$. In this situation, controlling for the factors observed by the investigator does not remove the covariance between the errors in the outcome and the selection equations. Now note that the regression coefficient $\sigma_{ju} = \mathrm{cov}(u_j u)/\mathrm{var}(u_j)$. If selection is on unobservables, controlling for some variable x in the outcome equation may reduce the error variance u_j without equally reducing the covariance $u_j u$. Hence, the coefficient on the omitted variable will be larger and the bias will be exacerbated.

Accordingly, the expected values of the observed cases will be biased because they co-vary with the variable that determines which cases are observed. This bias can be corrected by conventional controlling procedures. But if bias stems from unobservables, such controls will only worsen the bias. As Heckman (opp.cit: 7) argues, the dilemma is that different methods of correcting for selection bias are robust if there is *no* bias to begin with; if there *is*, there is no guarantee that the methods are robust.

The problem is similar whether we study large or small N's (Fearon, 1991). De Toqueville provided a nice exemplification with his observation that revolutions do not seem to change anything. The reason might be that they occur only in countries where it is difficult to change society in the first place. Accordingly, even studies based on $N = 1$ may suffer from selection bias: the French revolution may have been caused by the same conditions that made social change so difficult. It is possible that a revolution in a country where social relations are easier to change would have provoked change. But then a revolution would not have been necessary.

This suggests that more qualitative case-specific methods that prioritize dialogue between researcher and the case hold no special advantage over MR as far as selection bias is concerned. In essence, the only genuine method to correct for selection bias is to construct counterfactuals, to fill in the unobserved values in the distribution of y for all x's. Comparative analysis of the case-study variety cannot benefit from statistical distributions to generate the counterfactuals. In this respect there is accordingly something to be said for methods, like MR, because they provide such distributions and because they permit us to estimate covariance coefficients.

The problems related to endogeneity are virtually identical and require, therefore, less elaboration. There are, however, a few small points to add. Endogeneity is present when our x's are conditionally dependent on y. Using welfare state research again to exemplify, this can be because social policies directly influence the parliamentary fortunes of social democracy (the Swedes love their welfare state and vote Left to ensure its continuity). It can also be because Sweden's welfare state *and* Sweden's unique variety of social democracy are part and parcel of 'everything that is Sweden'. In the latter case, the true x and y for Sweden is not left power, nor welfare statism, but a full list of all that is uniquely Swedish.

If this is so, the fixed-effects panel estimation approach will go wrong since it assumes that x will have an identical impact on y regardless of which country. But if the left power effect on welfare statism is 'Sweden' or, perhaps, 'Germany' specific we should assume non-identical effects. Similar to the identification of selection on observables, we might therefore introduce controls for everything that is Sweden or Germany specific. Small-N studies with strong endogeneity have little capacity to extend the number of potentially necessary controls. The solution is therefore, once again, to concentrate on the theoretical elaboration by means of counterfactuals.

One promising avenue is to redefine the dependent variable so that it is less likely to incorporate all that is Swedish, and/or so that it is less likely to directly pattern voters' party preferences. Indeed, the welfare state literature

has to a degree moved in this direction by replacing aggregate measures (such as social expenditure) with narrower indicators that measure specific properties of welfare states. However, the underlying problem may still remain if such properties are, once again, the mirror image of 'all that is Swedish' rather than verifiably related to specific values of $(x|z)$.

If MR is applied to a sufficiently large number of N's and used for diagnostic purposes, it can be a powerful and efficient method for detecting endogeneity – certainly superior to the kinds of low-tech alternatives discussed by Shalev. We do have good testing procedures to detect non-identical x-effects in fixed-effects regressions or, alternatively, we can use an IV approach within two-stage least squares estimation. These options are typically precluded in small-N studies and we are, therefore, back again to the importance of counterfactuals as our only realistic alternative.

In brief, my response to Michael Shalev's argumentation is that we should favour whichever method delivers superior information about the underlying statistical distributions. In some cases, MR may be the relevant choice; in others, possibly not. We should, above all, be careful not to throw the baby out with the bath water. MR has very powerful and easy-to-use diagnostic tools that can be mobilized for what statistical analysis really should pursue, namely to search for the true causal mechanisms. If, instead, we continue the past tradition of employing MR to show that our β and R^2 are bigger than others', then I agree whole-heartedly with Shalev. His lower-tech alternatives are less likely to produce violations of basic estimation assumptions than is the uncritical MR-based search for superior R-squares.

NOTE

1. Many of the points to be covered in this paper were previously examined in Esping-Andersen and Przeworski (2000). For illustrative purposes, I will draw primarily on examples from my own work on comparative welfare states.

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TOWARD IMPROVED USE OF REGRESSION IN MACRO-COMPARATIVE ANALYSIS

Lane Kenworthy

I agree with much of what Michael Shalev (2007) says in his paper, both about the limits of multiple regression and about how to improve quantitative analysis in macro-comparative research. With respect to the latter, Shalev suggests three avenues for advance: (1) improve regression through technical refinement; (2) combine regression with case studies (triangulation); (3) turn to alternative methods of quantitative analysis such as multivariate tables and graphs or factor analysis (substitution). I want to suggest some additional ways in which the use of regression in macro-comparative analysis could be improved. None involves technical refinement. Instead, most have to do with relatively basic aspects of quantitative analysis that seem, in my view, to be commonly ignored or overlooked.

LOOK AT THE DATA

Shalev's third suggested path for progress consists of using tables, graphs, and tree diagrams to examine causal hierarchy and complexity and to identify cases meriting more in-depth scrutiny. This should be viewed not as (or at least not solely as) a substitute for regression but rather as a critical component of regression analysis. All of us were (I hope) taught in our first

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regression course that it is not enough to simply get the data, estimate some regression equations, and then draw conclusions. It also is necessary to get a feel for the data, in large part by examining descriptive statistics and looking at bivariate and/or multivariate patterns. Too many macro-comparativists, I suspect, either do not do this at all or do not do it sufficiently carefully.

In some instances what one finds by looking carefully at the data enhances or enriches what regression analysis tells us. Sometimes it calls into question the utility of using regression. Sometimes it suggests ways of altering the regression, for example by adding interaction effects, considering alternative functional forms of relationship, excluding certain cases, and so on. The tree diagram Shalev shows in discussing Bo Rothstein's (1990) analysis of determinants of unionization and the graph he uses in discussing Peter Hall and Robert Franzese's (1998) analysis of the impact of central bank independence and wage-setting coordination on unemployment are useful examples of what one can learn by spending a great deal of time looking at and thinking about the data. (That is not to suggest that either Rothstein or Hall and Franzese necessarily failed to do this. Sometimes we miss things, no matter how hard we look.)

It almost always is best to look at the data in graphical form. There are circumstances in which we can spot interesting patterns in tables. But it is much easier to do so when data are displayed graphically (Cleveland, 1993, 1994; Tufte, 2001; Wilkinson, 2001; Gelman, Pasarica, & Dodhia, 2002). Happily, these days the investment required to learn how to create both simple and relatively complex graphs is minor.

SHOW THE DATA

Quantitative analysis involves data reduction. But in my view, most recent quantitative macro-comparative work goes too far in this direction. The typical analysis includes 18 or so countries. In this type of research, unlike in analyses of thousands of individuals, the cases both are of substantial interest in and of themselves and can matter for our interpretation of regression findings.

The typical paper includes a few tables showing regression results and perhaps an appendix listing means and correlations among the variables. This is helpful information. But much more could be made available to readers. In particular, it is possible without taking up too much space to let readers see most of the raw data. In a cross-sectional macro-comparative paper the author can actually list all of the data used in the analyses – that

is, the values for each country on each variable – in a table. For analyses that utilize longitudinal data, graphs displaying the time series for each country for key variables can be included. Bivariate or multivariate scatterplots can help readers (and authors) to see patterns in the data that warrant scrutiny.

GREATER TRANSPARENCY IN PRESENTING REGRESSION FINDINGS

In the typical textbook explication of multiple regression, the author shows the results of a bivariate regression (one independent variable), then introduces the notion of spuriousness and the concept of "controlling" with non-experimental data, and then proceeds to add one or more additional independent variables. The coefficient for the original independent variable changes, and the reader thereby learns about partial associations and omitted variable bias.

This analytical strategy is not only useful for pedagogical purposes. It is an appropriate way to proceed in "independent-variable-centered" analyses. In such analyses the research question concerns the effect of one (or sometimes two or three) independent variable on the outcome. The question is "what is the impact of X_1 on Y?" Sometimes, by contrast, the research is "dependent-variable-centered": the research question is "what causes Y?" In a dependent-variable-centered analysis it may be more appropriate to begin with a large number of (theory guided) independent variables and then gradually reduce the number according to criteria such as statistical significance or contribution to adjusted R^2.

Most analyses in macro-comparative research are independent-variable-centered. The question is something like "What is the effect of left government on social policy generosity?" or "What is the impact of wage-setting arrangements on unemployment?" Yet most analysts proceed by including as many controls as possible in their initial regression. Sometimes this is the only regression presented; in other instances some of the variables are then dropped and a second (and perhaps third and fourth) regression is shown.

A common circumstance is that we have fairly strong reason to suspect there will be an association between the hypothesized causal factor and the outcome, and the expected association is there at the bivariate level, but then it disappears in a multivariate analysis. Also common is that we have a not-terribly-compelling theory suggesting a link but no bivariate association, yet in the regression with 10 or so control variables the association appears.

Sometimes these multivariate findings are correct. But we should be suspicious. Those who have done enough multivariate regression analysis know well that it is sometimes (not always) possible to get the expected and/or hoped for finding to emerge if enough model specifications are tried.

As researchers and as consumers of others' research, we should want to know exactly how such a finding has emerged. That requires going step-by-step through the regressions, from bivariate patterns to the results of adding each of the various controls. Which particular control or set of controls makes the association change? Is that particular specification more theoretically compelling than others? How robust is the association to alternative specifications (not to mention measurement choices, groups of countries, and time periods)? Walk the reader through the analyses and findings. Allay suspicion by making it as transparent as possible what is going on in the data. Of course, space constraints typically permit showing only a limited number of the regressions. But the reader should nevertheless be informed of exactly what produced the result for the variable of interest in the preferred model specification.

WHICH VARIATION?

Macro-comparative analysts who use pooled cross-section time-series regression often fail to make clear what variation they aim to explain. There are three main options. One is variation in levels across countries. Here one can estimate cross-sectional effects averaged over multiple time periods (years, business cycles, decades). An example might be the impact of left government on welfare state generosity across 20 countries, averaged over the 1980s and 1990s. A second is variation over time within countries. Here regression can estimate an average over-time effect for a set of countries – for instance, the effect of left government on change in welfare state generosity in the 1980s and 1990s, averaged over 20 nations. A third is cross-country variation in change over time. We might, for example, be interested in the impact of left government on cross-country differences in change in welfare state generosity in the 1980s and 1990s.

Pooled regressions usually focus on one or the other of the first two of these, and most commonly on both. Following Larry Griffin, Walters, O'Connell, and Moor (1986) and Kittel (1999), Shalev rightly notes that a common problem with use of pooled regression in macro-comparative research is that researchers combine these two types of variation without (apparently) considering whether it is reasonable to expect that the

causal process will be the same for both. Often that assumption is questionable.

Suppose cumulative left government is a major determinant of cross-country variation in welfare state generosity across 20 OECD countries as of 1980. But suppose it then has little or no effect on developments within these countries during the 1980s and 1990s. Perhaps over-time changes during these two decades are dominated by budget pressures and globalization. A pooled regression that does not distinguish between the determinants of cross-sectional variation vs. over-time variation will miss something very important in this type of situation.

Explaining cross-country variation in over-time changes is something different altogether. Suppose changes in budget pressures and globalization account for a significant portion of the longitudinal variation in welfare state generosity within each country in the 1980s and 1990s but that neither varies much across the countries. These two factors will not, then, help in explaining the differences between the countries in the direction and degree of over-time change. Those differences might instead be due to catch-up effects or to variation among the countries in public support for generous benefits or in the structure of the political system.

Fig. 1 illustrates these hypothetical differences in types of variation, using data on public social expenditures as a share of GDP. Setting aside the

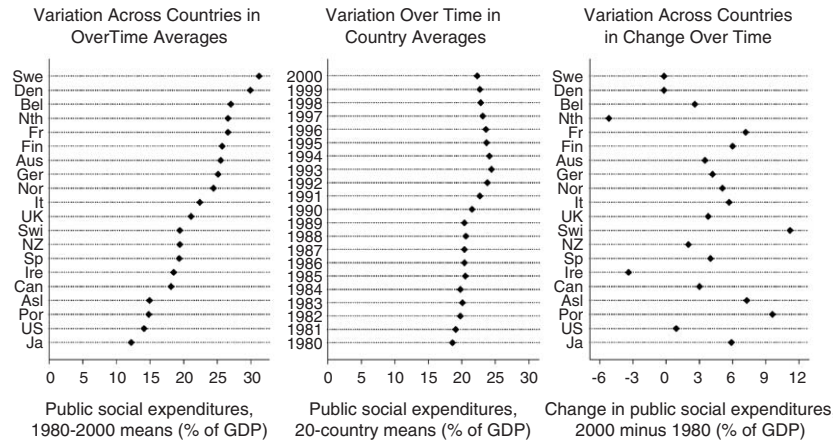

Fig. 1. Three Types of Variation in Public Social Expenditures. *Note:* Author's calculations from data in OECD (2004). The ordering of countries in the third chart follows that in the first chart, to highlight the contrast.

question of whether this is a useful measure of social policy generosity, the three charts show clearly that there are sizeable differences. This suggests the possibility of differing causal processes.

Macro-comparative researchers need to be clear about the type of variation to which their theory applies. And for empirical analysis the default assumption should be that causal patterns for cross-sectional and over-time variation differ. The utility of pooling should be demonstrated rather than presumed.

LONG-TERM VS. SHORT-TERM EFFECTS

Many pooled regression analyses use annual data. As best I can tell, most of the time that is because such data are available and because using them increases the number of observations, allowing for inclusion of more independent variables and enhancing statistical power. But many of the theories such analyses test imply medium-to-long-term effects. Sometimes analyses with annual data can pick up such effects, but that hinges on getting the lag structure correct. More often than not, using annual data to examine hypothesized medium-run or long-run associations will obscure rather than clarify.

But using longer time periods reduces the number of observations, heightening concern about omitted variable bias. What to do? There is no ideal solution. My preferred strategy is to examine all possible combinations of a "reasonable" number of independent variables (Kenworthy, 2004, 2007). For an N of 15 or so, that means perhaps three or four. This by no means eliminates worry about biased results due to improperly specified models. But inclusion of more independent variables is not inherently better in this regard (Lieberson, 1985; Achen, 2002). And in any event, having a better specification is not an improvement if the time period is wrong.

STATISTICAL SIGNIFICANCE?

Over the past decade much of the methodological debate in quantitative macro-comparative research has focused on how to properly estimate standard errors in pooled regressions. But in most instances such analyses include the full population of affluent countries in the time period considered. Where a sample is used, the sample is almost always dictated

by data availability; there is no pretense that it is representative of the population.

Statisticians disagree about whether there is a rationale – based on the ''superpopulation'' notion – for considering statistical significance in this type of circumstance (Berk, 2004, offers a useful discussion). At the very least, however, analysts who believe standard errors are important to consider should offer an argument in favor of doing so, instead of simply doing so because it is conventional practice. Either way, many macro-comparative analyses would be substantially improved by paying more attention to the direction, size, and robustness of regression coefficients and less to statistical significance.

REGRESSION AS THE ANALYTICAL STARTING POINT

Because we often are dealing with the full population, macro-comparativists should treat analyses less as a means of drawing generalizable inferences and more as a means of understanding the cases (Ragin, 2001). In the prototypical quantitative macro-comparative article, the regressions are the starting and ending point of the analysis. I would like to see more papers in which regression is used to inform discussion of cases. What do the regression results tell us about why country A or regime-type B turned out as it did or changed in the way it did? Discussion of cases can then, of course, be used to question and/or further explore the regression results.

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HOW TO GET AT CAUSALITY IN THE SOCIAL SCIENCES: MULTIPLE REGRESSIONS VERSUS CASE STUDIES

Bo Rothstein

I am grateful to the editors of this journal to be given the possibility to comment on Michael Shalev's article. Although I have some minor disagreement with his general argument, I am also grateful to Michael Shalev for taking up what I think is an important question in comparative social science. I find myself in the curious position of being a target of a general critique that I mostly agree upon, namely that too much energy is going into sophisticated methodological techniques at the expense of substantive knowledge about individual cases and theoretical reasoning about causality. However, and probably not surprisingly, I find Shalev's critique of my particular venture into this area far from convincing.

Let me start with the former problem. When I look out from the window at my office, I can see an interesting regularity of behavior, namely that cars make a stop when there is a red light. Since I sometimes work late when there is very little traffic, the case becomes really puzzling because the cars stop even if there are no other cars at the intersection or any pedestrians that want to cross the street. The question is how we should explain this strange pattern of behavior. So, I went over the street to my colleagues at the

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department of economics and asked. ''Piece of cake'' they say. The drivers stop because there is a clear and well-known incentive structure – they will get fined if they don't make a stop. As usual the economists' answer did not convince me since I can see that cars stop even if it is in the middle of the night when the chance of being caught by the police is miniscule.

My colleagues at the Göteborg Institute of Technology gave a very different answer. According to their findings, the cars came to a halt because there is a complicated technical device in the car linking the downward movement of the brake pedal to the brakes connected to the four wheels. Without this technical device, the cars would not make a stop. But then my friend, the brain neurologist, argued that the reason the cars came to a halt was that there is a neurological link in the brain that connects what the drivers' eyes register to a certain movement of the drivers' leg that makes them move the leg when they register that the light shifts from green to red. Without this neurological link from brain to leg, drives would not be able to stop the car when the light turns red. ''This is all very silly'', my friend the sociologist later told me. The reason that the cars stop is that drivers in Sweden have been socialized since childhood to internalize a norm that when there is a red light, the appropriate thing to do is to stop. However, drivers in some other countries are much less socialized into this norm. They would drive even if there was a red light. We should carry out a comparative project on this. Later, at a conference, I met some colleagues working on evolutionary game theory. Their answer was that by trial and error, drivers had found stopping at red light a useful ''convention'' that would change what used to be a ''chicken-race'' type of game to an ''assurance game''. But to the question how this all started they had no answer that was based on any empirical research.

My point is this – causality in the social sciences is a hard thing since it operates on different levels (the individual, the organizational and the societal). Finding out exactly why agents do what they do is very difficult. If it is large aggregates of agents (the working class, the employers, the politicians) it becomes even more complicated. The most common explanations are either self-interest, or social norms, or values. When it comes to self-interest, there is now tons of empirical work showing that this explanation is of limited value (Fehr & Fischbacher, 2002; Gintis, 2004; Jones, 1999). Social norms are certainly important, but that begs the question why people in different social settings have so different social norms. Explanations that are based on values tell us that people do things because they want to do them. This is probably correct but not much of an explanation because it is not very far from saying that people do things because they do them. People

vote on the parties the like, marry the partners the love and join or do not join unions because the like or dislike what the unions do. In other words, explanations based on values are close to just repeating the behavioral data. The modern fad in this is that people do things because they want to handle risks. But then we lack an explanation why are people in different societal settings so different when it comes to how they perceive risks?

While I agree with much of Michael Shalev's critique against the use of multiple regressions, it is far from new. When I wrote my dissertation about how the Swedish Social Democrats implemented to of their major social reforms (the active labor market policy and the comprehensive educational system), instead of a quantitative approach I used the comparative historical case study method. I was then inspired by the methodological work by Alexander George who argued that what happens in the few cases many variables situation is that one adds the one independent variable after the other in order the increase the r2 (George, 1979). Very soon, what happens is that one thereby describes each case a unique (Switzerland? add referendums; United States? add the Supreme court; the Netherlands? add consociationalism, Germany? add Federalism). Alexander George's argument, which I followed and still think is the best, was that a theoretically motivated selection of a few cases for which the researchers tries to trace the process of how the main variables has been connected over time was superior to statistical methods such as multiple regressions.

I also agree with Shalev's argument that no statistical or econometric technique can replace theoretical reasoning about causality. This is of course based on a meta-theoretical standpoint – I happen to be a silent but card-carrying member of what is known as the "realist" school in the social science. This implies that you want theories that not only make good predications but also are in line with reality (MacDonald, 2003). The problem is that such theories become pretty complicated if you are going to explain human behavior because to a large extent, what people do depends on what they think that "the others" are going to do (Shapiro & Wendt, 1992). For example, you may join the union of you think that enough other workers also will join, because it makes no point to be a member and pay dues to a union that is weak or ineffective. My argument in this specific case is that if there is some kind of institution in place that makes it likely that most workers believe that most other workers will join the union, you will get strong unions regardless of social norms, values or self-interest. The French case is maybe telling – it seems that many French workers are likely to act in solidarity with other workers when there is a "grand issue". However, because the French unions lack an institutional device as described above,

the degree of unionization in France is among the lowest in the OECD countries.

As for the particular article of mine that Shalev criticize, my comments are that his critique is unfair, unconvincing and misses the main point. It is unfair because readers get the impression that my whole argument about the importance of the Ghent system for explaining degrees of unionization is based solely on using the multiple regression method. The fact is that eighty percent of the article contains exactly what Shalev is asking for, namely a detailed historical case study based on original archival data explaining under what social and political circumstances it was possible to introduce this type of unemployment insurance system in Sweden, the rationale of why the agents did it and what political effects it had in this particular case compared to other cases. Using secondary sources, the particularities of the Swedish case is then briefly compared to other the historical situation in countries such as the UK, Denmark, France and the Netherlands. It is also unfair to criticize me for not having a ''well-developed'' theory of why workers would be more inclined to join unions if the unions control who will get support if claiming to be unemployed. In this case, I constructed a combination of three very ''well-developed'' theories, namely Michael Lipsky's theory of the importance of decisions made by ''street-level bureaucrats'', Mancur Olson's theory of the problem of collective action and Marxist theory that the institutions that influence the ''buying and selling'' of labor force should be the most important if one want the understand power relations in a capitalist society. Since there are literally thousands of institutions in any given society, one has to have a theory why some institutions are more important than others. Anyway, these three theories operate on different levels (the societal, the organization and the individual) and I connected them according to a model I had developed in my earlier work (Rothstein, 1986, 1996). The theory goes as follows: Since what constitutes being unemployed can always be questioned (what type of work at what wage should the jobless person have to accept or how far should he/she have to move to find work without risking to loose the benefit), the decisions made by the ''street-level'' bureaucrats that implement the unemployment insurance becomes essential. Since workers in a country with a Ghent system ''know'' this, they are likely to join unions since it is union officials who make these decisions. Secondly, this power over the process of implementation gives the unions what Mancur Olson named a ''selective incentive'' that makes it easier for them to overcome the problem of collective action. Lastly, the Marxist theory would tell us that more unions have power over institutions that influence the ''buying and selling''

of labor power, they will be a stronger force in society. My theory may of course be inaccurate, but Shalev's statement that my argument lacks "causal meaning" and therefore is not "theoretically plausible" is simply not valid. It should be added that I substantiated my argument for how the causal mechanisms operate by referring to two surveys that were carried out in Sweden during the 1970s. My interpretation of the results from both these surveys supported the causal argument I made. If Shalev wanted to criticize the way I theoretically specified the causality, he should have criticized my theory as it was presented and/or come up with an argument that refuted my interpretation of the results from these surveys.

Moreover, when the article was published, I had already published two articles and two books which in detail described the historical particularities of the Swedish (Rothstein, 1986, 1987, 1990, 1992a, 1996). In these books and articles, I do exactly what Shalev asks for, namely describe how the strength of the union movement increased the political support of the Social Democratic party which in its turn used its political power to strengthen the union movement, and so forth. In the article he criticize, I could of course have presented more historical material of this kind, but these things take a lot of space and I am probably not the first author who have had to limit what can be done in an article for an edited volume. In any case, the references to my earlier work are there so the existence of this research of mine cannot come as a surprise to Shalev. In sum, the argument that I should have made the particularities of the Swedish case "invisible" by concentrating my research on using multiple regressions is not born out by the facts, neither in the specific article Shalev criticize, nor on my other work. The argument that I have simply used "linear models" and been insensitive to the dialectics of social processes (so-called feed-back mechanisms, or to use Shalev's term, "interactions effects") is simply not true. On the contrary, this has been a main point both in the specific article he criticize and in my previous work.

One part of Shalev critique is simply impossible to understand. He writes that instead of showing the results from the regression, I should have shown "tabular or graphical presentation of the dataset with named observations" which would have permitted selecting "outlayers" for further historical analysis. Exactly such a table is presented in the article *before* the results of the regression is shown. My comment to this table and the regression in the paper reads:

> Taking the "visual" result from table 2.1. Into consideration, we can say that it is possible to have a fairly strong union movement without a Ghent system, but that in order to have really strong unions, such a system seems necessary. It must be recalled,

> however, that this statistical analysis does not help us understand how the causal link operates. It might very well be true that already very strong labor movements have introduced Ghent systems, rather than vice versa. In order to get a handle on this problem, we must go from static comparison to diacronic comparative analysis. (Rothstein, 1992b, p. 42f)

It is strange to be criticized for having omitted things that are in the article. Shalev's critique becomes even more puzzling since he argues that I make a mistake by refuting two other explanations for the variation in union density. The first one – the size of the potential membership – had been put forward by Michael Wallerstein and the reason I refuted it was because I could not find a theoretically plausible argument for how the logic at the micro-level could operated. This is exactly what Shalev asks for, namely that one should not believe in the causality of independent variables no matter how statistically significant they show up if there is not "a well-developed theory". The other variable that I doubted was the strength of left party participation. The reason I did this is the by now well-known "feed-back" mechanism problem that my earlier historical work had shown to be at work. Left parties in government are likely to enact laws, policies and regulations that will strengthen the unions and the unions will in their turn use this strength to support the electoral campaigns of left parties, and so on. What explains what (is it strong unions that give rise to left party governments or is it left party governments that explains strong unions) can as I wrote in the article not be solved by using multiple regression. When Shalev states that I disregard that the effects of one of the variables can "be conditional on the value of other variables" he is simply making things up. I find somewhat puzzling that Shalev criticizes me for things I actually have done that he argues should be done.

Moreover, Shalev's argument that the importance of a Ghent system is overblown in my article is unconvincing. His argument is that even in "well-matched" countries like Belgium versus the Netherlands or Sweden/Denmark/Finland versus Norway, there may be other factors that explain the huge differences in unionization. His argument for why Ghent system Belgium at that time had a 74 percent degree of unionization while the non-Ghent system Netherlands had only 29 percent is that Belgian unions are stronger at the work place. But the reason a union movement is stronger at the work place is very likely due to the fact that it has control over the unemployment insurance. For the difference between the otherwise very similar Nordic countries (were non-Ghent Norway has a degree of unionization 26 percent below the other Nordic countries), Shalev argues that this may be because the Norwegian unions had "lesser effectiveness" in

recruiting new members from the 1960s an onward. But according to my theory, this may be precisely because Norwegian unions lacked the type of "selective incentive" that I argued the Ghent system provides. Lastly, Shalev is not in line with the historical facts that I report in the article when he states that "only countries with a substantial left had the Ghent system". As I show in the article, in Denmark it was a conservative government that introduced the Ghent system while in Norway and the Netherlands it was left governments who replaced such systems with government controlled unemployment schemes. I find it problematic that Shalev argues for research that is more historically contingent, but when this research does not fit his argument, his simply dismiss the facts.

What is behind all this nonsensical critique from a seasoned social scientist like Michael Shalev? My guess is that Shalev wants to rescue the so-called "power resources" model that he and others had developed and that my research showed to be incomplete for explaining the variation in "working class strength". In short, the power resource model argues that the stronger the political power of Social Democratic parties, the more social policies for equality would be enacted. What has been omitted in this theory is a simple yet important question, namely why do some countries have "more Social Democracy" than others? This is where Shalev's critique misses the point of my article. He portrays the argument as if the question was about how many fractions of a percentage of the degree of unionization the existence of a Ghent-system can explain. As is clear from the article (and the volume it was published in), this was never the main question. Instead, the problem was how the dramatic variation in organizational strength of the working class could be explained. Or in other words, why some countries are "more Social Democratic" than others? I found it problematic that the cherished power-resource theory was (and still is) silent on this central question. Assuming that the thirst for Social Democracy is not genetic in some populations or has to do with inherited ancient social norms, the question I posed was what role *political institutions in general* could have played in the development of this astonishing variation in union strength. This also had to do with the wider theoretical agency-structure debate in the social science, since the question I posed was s if it was possible to find political agents within the labor movement that had the power to establish institutions that would increase the future organizational strength of the working class. Moreover, the question was if these agents also created such institutions with this strategic goal. This is a central question in institutional analysis, namely if institutions just evolve as functionalist responses to diverse and unconnected societal forces, or if they can be designed by agents so

as to alter power relations in a society (Thelen, 1999). For any type of social science that wants to be policy relevant and not just give "after the facts" explanations, such knowledge is of course central. The power resource model is cleansed of such political agency – the power of the organization strength of a county's working class just rains down (or not) like manna from heaven. The power resource model has been quite successful for explaining that politics matters for policy, but not for explaining why different countries have different (read more or less Social Democratic) politics.

What I was able to show was that in just one particular case (Sweden) it was possible to find a political agent that both understood the future logic of the institution he enacted and had the power and political skill to establish it. But I could also show that most agents misunderstood the long-term consequences of the institutional devices they debated. For example, while the leadership of the powerful Metal Workers union in Sweden wanted to support the introduction of the Ghent system, its more left-oriented members voted against the system at no less than three union congresses during the late 1930s.

The argument I made was thus that Ghent system was but just an example of this institutionalist theory. Moreover, I underlined that there could be other types of institutions that would have the same effect (think about a society in which the unions have control over the health insurance system and where union officials decided what types of medical treatments would be covered by the insurance). In my own (now almost twenty year old) words: "we should concentrate on *political institutions directly affecting the* relations *of production*. In common language this means labor-market institutions or policy taken in a broad sense, including such things as rules governing the right of labor to organize and take collective action against capitalists, unemployment policies, training programs, etc." (Rothstein, 1992b, p. 23). For example, the comparatively high degree of unionization in non-Ghent Norway can in all likelihood be explained by existence of other institutional devices the unions has influence over and that to some extent plays the same role as a Ghent system. An example if how this worked can be found in Svein Andersen's fine comparative study of how industrial relations evolved differently in the British and Norwegian off-shore industry (Andersen, 1988). I can also add that after the Social Democrats lost the election in Sweden in September 2006, the first major quarrel between the union movement and the new Conservative led government is .... quess what? The unions strongly oppose the new governments' policy to make the unemployment insurance mandatory and thus disconnect it from the unions' control (see for example *Dagens Nyheter*, 2006-10-24).

To go back to the general problem with using multiple regressions, I think Shalev misses one of the major problems. I am thinking about the argument put forward by Peter Hall that ''the ontologies of comparative politics have substantially outrun its methodologies'' (Hall, 2003). Hall's first argument is that we often assume unit homogeneity while we know that this is not the case. For example, six years of Social Democratic rule in the 1930s are not equivalent to six years of Social Democratic rule in the 1980s. Secondly, the development of an ontology that recognizes strong feed-back mechanisms and lock-in effects between variables over time (such as the relation between union strength and Social Democratic electoral success), is not compatible with the idea that the world consists of variables than can be clearly distinguished by labeling them ''independent'' and ''dependant''. Strategic interaction or institutionally induced pay-offs that serve to strengthen the reproduction of that very institution, are but two examples of this problem. Thirdly, we have observations that the event(s) that ultimately puts a system on to a specific historical ''path'' leading to a unique equilibrium (such as the establishment of a Ghent system), may have occurred at ''formative moments'' very early in the process. Hall's point is well taken, namely that such ultimately important variables that are to be found in a ''distant past'' are hard to capture by using the standard regression method. Hall's main recommendation for aligning ontology and methodology in comparative politics is that analysis should be centered on the tracing of processes so that we can uncover how the causal mechanisms operate. This is what I have tried to do in my work and therefore Shalev's way of portraying what I have done is not only inaccurate in its details but also a misleading description of my research.

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WHAT COMPARATIVISTS REALLY DO

Duane Swank

Michael Shalev has made several important contributions to the fields of comparative political and social research; among his most prominent work is his seminal and more recent contributions to the study of the welfare state (e.g., Shalev, 1983, 1996). The current essay on the problems inherent in the use of multiple regression techniques to test rich, complex theories in comparative politics adds another important article to this set of works. Indeed, Shalev is certainly right in arguing that, in some portion of comparative research that relies principally on multiple regression (hereafter MR), the ''real world'' cases of comparative analysis (e.g., national states, institutions, collective actors) have been at least partially ignored and that tests of contingent and conjunctural causal arguments have been notably oversimplified within the linear, additive analytical framework of regression analysis. Many other problems mentioned in the essay, namely, that generic problems of statistical control and inference abound in quantitative comparative analysis and that the promises of ''high powered'' techniques such as pooled time-series cross-section (or panel) analysis are overly optimistic, are too frequently ignored or underestimated by researchers. Yet, on the other hand, a careful review of the actual work of contemporary political analysts – the very scholars Shalev singles out as among the leading practitioners of MR and pooled time-series cross-section (hereafter PTSCS) analysis – suggests

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that a substantial number of current comparativists are much more attuned to the central problems Shalev highlights than his essay admits.

Shalev makes a series of criticisms against the general use of MR in comparative political research. He also argues that PTSCS analysis offers little escape from these general weaknesses of regression analysis and that PTSCS analysis presents quantitative comparativists with additional difficulties that make their plight worse rather than better. Ultimately, his answer is to use a visually oriented case-variable method where cases, properly named, are brought center stage for (non-statistical) analyses of (co)variations among two to three complex variables; this analysis is conducted primarily through use of tabular or graphic devises (e.g., tree diagrams; two-dimensional graphs). In the following pages, I will focus in some detail on what I believe are two of his most important critiques of the use of MR in comparative analysis; I will offer only a brief commentary on what I believe are less important or pressing issues connected to the use of MR, and on Shalev's critique of PTSCS analysis. Again, the thrust of my comments on Shalev's generally useful discussion is that he misses a lot of what contemporary researchers actually do (i.e., how they design and execute research). In essence, comparative political analysts recognize most of the problems and difficulties he highlights in his essay and they actually offer quite sophisticated responses to these problems much of the time.

INVISIBLE AND COMPLEX CASES

Perhaps one of the most important points Shalev makes is that Przeworski and Tuene's (1970) admonition to comparative political analysts to replace the proper names of cases with concepts and variables, or to pursue what Ragin (1987) dubs variable-oriented research, has gone too far. In Shalev's view, cases (typically nation states for the purposes of this discussion) have become all but invisible. This is particularly troublesome in Shalev's mind because, at least as far as comparative analysis of developed democratic capitalist systems is concerned (and we can say the same for political research on Latin America, Africa, or Asia), the cases are few enough to know quite well and bring to the forefront of sophisticated analysis.[1] In addition, Shalev makes the distinct point that the theories we seek to test in comparative political research entail complex and often non-linear causal sequences: causes of particular political outcomes are commonly contingent on the presence of other forces, or conjunctural with temporally and spatially bound forces and contexts. In fact, in comparative theory, it is fair to

argue (as Shalev does) that causal explanations of important political outcomes are often put forward in terms of complex configurations of multiple factors. Moreover, in theory and in practice, we are often confronted with the prospect of multiple configurative paths of causation of the same outcome. In the end, Shalev believes that the linear and additive logic of general MR analysis, as well as the more sophisticated versions with non-linear specifications and interaction terms, cannot adequately test our complex theories.

The Usual Suspects

I wish to address these two important sets of issues by focusing on the work of scholars that Shalev identifies as visible and sophisticated practitioners of MR analysis. In the introduction to his essay, he identifies Carles Boix, Robert Franzese, Geoffry Garrett, Tobern Iversen, and myself, scholars associated with the Cambridge Studies in Comparative Politics series of Cambridge University Press, as the ''usual suspects'' who practice advanced MR analysis (including PTSCS) and who use analysis of cases only ''in a subsidiary role.'' Although Shalev offers a detailed critique of one example of Franzese' work (Hall & Franzese, 1998) as well as Garrett's (1998) well-known book on globalization and national policy autonomy, he mentions only in passing other key works of the rest of this group. As in the world of film, the usual suspects have been rounded up and charged without a full examination of the evidence.

In addition, while he discusses the contributions of Alex Hicks to the literature on PTSCS analysis, Shalev ignores Hicks (1999) highly visible book on the political economy of the welfare state. This is a particularly important work for current purposes in that it is at the center of Shalev's substantive field of vision and that the book was awarded the 2000 Luebbert Award of the American Political Science Association for the Best Book in the Field of Comparative Politics. Generally, one could argue that the representative works of Boix, Iversen, and myself cited by Shalev as well as Hicks' award-winning book might be good indications of whether Shalev's critique of contemporary comparativists who practice MR is a fair one at that.[2]

For each of the works by Boix, Iversen, and myself, as well as for Hicks' 1999 book, I succinctly outline the content and method of the work. I assume many if not most readers are loosely familiar with these books and I focus on Shalev's charges of ''invisble cases,'' inattentiveness to complex

causal processes, and the absence of utilization of Shalev's preferred visually oriented case-variable method. As to the work of Carles Boix, I focus on his 1998 work (mentioned in passing by Shalev), *Political Parties, Growth and Equality*. Boix is most centrally concerned with whether or not social democratic parties can pursue distinct policy strategies (compared to parties of the Center and Right) to promote economic growth and material equality in the age of globalization. Through formal theoretical analysis, Boix hypothesizes that social democratic parties are likely to promote growth and equity through distinct interventionist supply-side policies. Parties of the Left combine active supply-side policies targeted to public infrastructure development with education, training, and related policies to simultaneously promote growth and equity in a world of economic internationalization; conservative parties in contrast prefer market allocation of investment and income. Boix initially evaluates these hypotheses through extensive MR analysis of cross-national data during one time period as well as PTSCS analysis (e.g., of 1960s–1990s annualized data from roughly 16 nations).

How does the comparative political analysis of Boix (1998) stack up when it comes to Shalev's critique? In terms of cases (developed democratic capitalist nation states), Boix not only includes multiple case references and synoptic illustrative case analysis during theory development and the interpretative stages of quantitative analysis, but the entire second portion of the book consists of rigorous analytic case studies, structured by the central theoretical questions at hand, of the formation and implementation of distinct policy strategies of the Spanish Socialist and British Conservative parties. What is particularly interesting is that Boix, during both theory development and quantitative analysis, repeatedly utilizes Shalev's own visually oriented case-variable method of graphic and tabular display of the positions of (virtually all) the developed democracies on two or three key political economic dimensions. For instance, nearly duplicating illustrative analysis in Shalev's article, Boix (Figure 2.3) maps individual developed democracies into a two dimensional space defined by educational attainment and unemployment rates; individual cases are also labeled as to their position on levels of the social wage (i.e., unemployment income replacement rates). The point of this analysis, in combination and dialogue with some simple regression analyses, is to provide a concrete, case-based initial empirical evaluation of key propositions about the influence of education and the social wage on economic performance (i.e., unemployment rates). Many further examples of Boix's (1998) utilization of Shalev's preferred method could be offered.[3]

As to analysis of complex causal processes, Boix judiciously uses carefully formulated empirical models and estimating equations to test key, formally derived hypotheses; interaction terms are used to assess contingent causal effects in quantitative analysis. The author further enriches the empirical assessment of theory with the aforementioned extensive case material on the Spanish and British cases. The causal basis of the strategic choices of Socialist and Conservative parties are teased out in the context of a finely grained analysis of the historic, institutional, and macroeconomic contexts of party choices in the post-OPEC Spanish and British political economies. The end product is a balanced, theoretically driven yet case-sensitive and multimethod analysis of an important set of questions in comparative political economy. Few if any readers, in my view, would vote to convict Boix of the crimes of MR purportedly so pervasive among the usual suspects.

The second work is the influential 1999 Cambridge University Press book by Torben Iversen (1999), *Contested Economic Institutions*. In this well-known analysis, Iversen seeks to understand which combinations of wage bargaining institutions and macroeconomic policy orientations and institutional infrastructures promote full employment and, in turn, how post-industrialization and globalization have altered the political and economic underpinnings of such successful configurations. Generally, the design and execution of Iversen's work is quite similar to Boix's (1998) research. Formal theorizing generates central hypotheses, which are evaluated with MR (especially PTSCS) analysis of 1960s to 1990s data from most of the developed capitalist democracies. Also similar to Boix's work, Iversen utilizes extensive synopses of case experiences and detailed, rigorous comparative case analysis of five key countries – Austria, (West) Germany, Norway, and especially Denmark and Sweden – to enrich quantitative analysis. Formal theory, quantitative empirical modeling and case analysis are in dialogue with each other throughout the book. And, perhaps most interesting with respect to Shalev's current critique and alternative, Iverson makes extensive use of the very tabular and graphic techniques recommended by Shalev to further enrich his analysis of core relationships (e.g., see Fig. 3.4 in which countries, differentiated by the non-accommodating or accommodating character of their monetary policy regime, are mapped in the two dimensional space of wage inequality and bargaining centralization). Overall, rich, complex comparative theory is generated and comprehensively assessed with multiple methods and a strong sense of the individual experiences of each of the developed capitalist democracies. In my view, the jury of readers would render yet another acquittal of a ususal suspect.

The third work to be considered is my own 2002 Cambridge University Press book, *Global Capital, Political Institutions, and Policy Change in Developed Welfare States*. In this research, I seek to systematically assess conventional globalization theory on the roles of economic internationalization in welfare state retrenchment as well as my alternative argument, namely, that domestic political and institutional contexts condition the policy impacts of rises in international capital mobility and trade openness. In one core chapter (Chapter 3), I provide the bulk of the quantitative analyses (principally PTSCS) of core theoretical propositions. The design and execution of the quantitative analysis is particularly sensitive to the non-linear and contingent nature of causal arguments. The bulk of the empirical portion of the book (Chapters 4–6) is an in-depth analysis of four Nordic political economies (Denmark, Finland, Norway, and Sweden), three continental welfare states (France, Italy, and Germany), and, in less depth, five Anglo liberal welfare states (Australia, Canada, New Zealand, the United Kingdom, and the United States). This qualitative analysis consciously recognizes the limits of large-N quantitative analysis to address causal sequence, collective actors' motivations, and rich historical and institutional contexts of strategic choices. Similar to Boix and Iversen's use of qualitative case studies, my use of case analysis is carefully structured to address central theoretical questions and to draw on the strengths of comparative case analysis (including process tracing within cases) in order to address the aforementioned shortfalls of quantitative analysis and to engage in a consistent dialogue with quantitative findings.[4] Overall, for these reasons, I would hope I would join the ranks of those usual suspects acquitted by the jury of readers.

As a final representative work of contemporary comparative research, I turn to the winner of the American Political Science Association's 2000 Luebbert Award for the Best Book in the Field of Comparative Politics: Alex Hicks' 1999, *Social Democracy and Welfare Capitalism*. In this book, Hicks seeks to explain the early adoption and later consolidation of the basic income maintenance programs of the modern welfare state. He also seeks to advance our knowledge about the determinants of post-World War II expansion and, ultimately, retrenchment of these core programs of social protection. While conscious of the continuing controversies over determinants of origins, expansions and contractions of 20th century income transfer policies, Hicks offers a set of core theoretical arguments that combines the insights from power resources and political institutional theories of welfare state development.

To test core and alternative theoretical explanations of welfare state origins, expansions and contractions, Hicks innovatively combines Ragin's

(1987) Qualitative Comparative Analysis (aka Boolean algebra), carefully designed PTSCS regression analysis and a battery of synoptic case analyses from the last decades of the 19th century to the last decades of the 20th century. Hicks' utilization of Boolean analysis of the conditions necessary and sufficient for early (circa 1920) and later (1930s/1940s) consolidations (i.e., comprehensive adoption) of income maintenance programs is bolstered by a comprehensive use of country names (e.g., in the truth tables of Boolean analysis) and constant reference to causal sequences in individual countries. So too is the MR (especially PTSCS) analysis of temporal and cross-sectional variations in welfare expansion and retrenchment. As in the historical analysis of determinants of welfare state consolidation, the quantitative analysis of expansion and contraction is especially sensitive to the adequacy of tests of complex non-linear and contingent causal effects. In fact, a major thrust of Hicks' analysis of 20th century consolidation of income maintenance programs is to theorize and assess the presence of multiple configurative paths to welfare state development. As with the works of Boix, Iversen, and myself, Hicks' impressive analysis of the 20th century welfare state development in democratic capitalism, which extensively employs MR analysis, arguably does a notably better job in making cases visible, combining multiple methods, and adequately assessing complex comparative theory on an important set of substantive questions than Shalev's critique of this body of quantitatively oriented work would predict. As in the world of film, most if not all of the usual suspects are innocent of purported crimes of which they are charged, or at least they are innocent of the felonies that may have been laid at their door.[5]

OTHER ISSUES

Shalev raises a number of additional issues with the use of MR in comparative political and social research. One set of issues consists of those connected with statistical control and inference as well as the use of apparent populations. This set of concerns, which encompasses much of quantitative social science, is far beyond the scope of this response. There are large and sophisticated literatures on these topics and Shalev, himself, barely scratches the surface. On the other hand, Shalev makes some rather specific claims about further problems with the use of MR generally, and PTSCS analysis specifically, that I would like to address.

First, Shalev argues that while MR is useful in disciplines such as economics where researchers are interested in the marginal effects, let us say, of

prices on economic output, political scientists and sociologists analysis are commonly interested in the impact of the presence or absence, let us say, of corporatism on economic growth. MR is purportedly less appropriate for these comparative political analysts. I find this criticism to be without merit. MR is perfectly suited for precisely estimating effects (i.e., mean differences) of a theoretically relevant variable such as the presence or absence of corporatism (and loads of other categorical variables) on continuous variables such as economic growth rates. Moreover, a particular family of MR-type estimators, event history (duration or hazard) models, are especially useful in estimating the determinants of categorical variables (for instance, see Hicks and Zorn's (2005) expert utilization of Cox hazard models of repeated events to assess the causes of the occurrence of welfare retrenchment).

Second, Shalev argues that the aforementioned problems of MR are magnified by conceptual ambiguity and imprecision in measurement. On the first part of this observation, I see no reason why quantitatively oriented political analysts should worry anymore about conceptual confusion and contention than more qualitatively oriented researchers. The dangers of fuzzy concepts for good research seem universal. As to the question of imprecise measurement, I would argue in response to Shalev that students of comparative politics now have access to many more databases and highly improved measures in many areas of research relative to comparativists in the late 1970s and early 1980s. To use an area for illustration that Shalev often invokes, the ability of researchers to measure across countries and time the degree to which interest representation and, in turn, national policy making is corporatist has vastly improved. Reliable and valid publicly available measures of employer and union organization (e.g., density, centralization) and incorporation of peak associations into national policy making forums is available in several databases, most notably, Golden, Wallerstein, and Lange (No date) and Traxler, Blaschke, and Kittle (2001).

Finally, Shalev is particularly critical of the proponents of PTSCS analysis. Beyond those problems already identified for MR, Shalev argues that researchers who use PTSCS analysis are commonly insensitive to the general question of whether one should pool cross sections of time series (e.g., the problem of potential parameter heterogeneity is ignored), and to the question of whether causal dynamics are different across temporal and cross-sectional dimensions of causal factors. In addition, Shalev questions whether the technical expertise required for PTSCS analysis generally, and for adjudicating contemporary debates and assessing technical advances specifically, is worth the investment for researchers given questionable payoffs. On the first point, this is indeed an important admonition for

researchers that is too often ignored. On the other hand, I would point out that it is now increasingly common for researchers to offer tests for parameter homogeneity in dynamic relationships across cross-sections (e.g., Swank & Steinmo, 2002) or test for theoretically predicted dynamic parameter heterogeneity (e.g., Swank, 2002, 2006). Researchers also increasingly test for cross-national parameter homogeneity at different time points and do so for explicit theoretical reasons (e.g., Kwon & Pontusson, 2002). Few if any of the scholars mentioned above are insensitive to this set of issues.

As to the last point, I am not convinced that technical complexity, alone, should deter researchers from learning and employing complex methods when substantive and theoretical questions suggest doing so. Many newer, increasingly utilized quantitative methods have generated important new findings (e.g., multilevel modeling) and are technically complex; few researchers would consider abandoning them.[6] Relatedly, Shalev cites eminent econometrician G. S. Maddala (1998) to cast doubt on technical advances in PTSCS, namely, the panel-correct standard error approach for Ordinary Least Squares regression developed by Beck and Katz (1995, 1996). It is the case, however, that Shalev's quote of Maddala to the effect that Beck and Katz procedures are "not, strickly speaking, correct" is misleading. What Maddala (1998, p. 61) says is "Some of the statements made in the Beck–Katz articles are not, strictly speaking correct, but these are minor issues and do not affect their analysis … The idea of using OLS with panel corrected standard errors is fine …" What Maddala is concerned about is a classic problem of the use of lagged dependent variable (which Beck and Katz recommend to explicitly model temporal dynamics) in the presence of autocorrelation. Maddala likes instrumental variables as the solution, Beck and Katz do not and will take the risk of inconsistency of the OLS estimators over the uncertainty of generating good instrumental variables. Overall, these technical complexities and debates characterize most areas of quantitative social science and, in my view, should not be regarded in anyway as a justification for abandoning techniques appropriate for many substantively and theoretically important questions.

CONCLUDING THOUGHTS

To sum up, my own view is that many of Shalev's admonitions to comparative political analysts who utilize on MR and PTSCS analysis are well worth taking to heart. It is certainly true that too often we lose track of cases

and oversimplify tests of complex theories. In addition, the challenges and technical difficulties of PTSCS are often minimized or ignored. On the other hand, most of the scholars cited by Shalev as leading practioners of MR and PTSCS analysis think about these problems and offer relatively effective methodological designs to advance research. As I hope I have demonstrated, the books (and many of the articles) of the usual suspects that Shalev cites combine sophisticated MR and PTSCS analysis with complementary quantitative and qualitative techniques in an effort to produce comprehensive assessments of the core substantive and theoretical questions at hand; several authors actually make use of Shalev's preferred technique of bringing cases with proper names to the center of the stage of analysis. This technique, as noted above, is most appropriate to exploratory analysis during theory development or to initial tests of simple hypotheses (and this is how the aforementioned authors use it). Overall, while all quantitative comparativists would benefit from a careful reading of Shalev's article, many contemporary scholars do a much, much better job than Shalev admits in designing and executing research.

NOTES

1. As such, Shalev's central point here both invokes and goes beyond the quantitative (variable-oriented) versus qualititative (case-oriented) methods debate over the best approach to testing causal theories in comparative politics. For excellent introductory overviews and discussions, see contributions to the 1995 *American Political Science Review* symposium, King, Keohane, and Verba (1994), Ragin (1987), and the excellent synoptic discussion in Chapter 2 of Rueschemeyer, Stephens, and Stephens (1992).

2. I do not include additional works of Franzese or Garrett (or others), or a defense of the focal works critiqued by Shalev, because length considerations suggest a discussion of a more limited set of representative works. Franzese and Garrett are, of course, more than capable of effectively responding to the crimes laid at their doorstep.

3. It should be noted that Shalev's alternative case-variable method is well-suited to the assessment of the plausibility of initial theoretical suppositions, or to provide exploratory tests of initial hypotheses. The problem with making this technique central to the analytical framework is that once a researcher is concerned with tests of hypotheses much beyond three variables, the technique becomes unmanageable. For instance, in Shalev's Chart 1, we map countries in a tree diagram by country size, strong or weak left parties, and the presence of the Ghent system. If we had one or two further dimensions (say economic openness, or openness and industrial concentration), the simple graphical exposition would resemble an organizational chart for the financial accounts of Enron.

4. For a formal schema for "nesting" case analysis in large-N quantitative work, and engaging the two methods in productive dialogue, see Evan Leiberman's (2005) important recent contribution in the *American Political Science Review*. While Shalev seems skeptical about the potential power of nested analysis, or more broadly "triangulation" (Ragin, 1987), I am much more impressed by its potential for both assessing and improving general theory as well as comprehensively understanding cases.

5. Shalev implicitly seems to recognize that the authors of books have more capacity to offset problems of MR analysis; the quantitative comparative analysts writing for journals (because of space considerations if nothing else) seem to be less able to make cases "visible," to adequately test complex theory and so forth. A brief response to this notion is simply to point readers to increasing numbers of articles in leading journals such as the *American Political Science Review* and *World Politics* that balance sophisticated uses of MR with relatively developed case-oriented material. For just two examples, see Iversen and Wren's (1998) combination of PTSCS and synoptic cases analysis of the "trilemmas" of the service economy in the *World Politics,* and Martin and Swank's (2004) multi-level, multi-method analysis of employers' preferences for social policy interventions in the *APSR*.

6. For an overview of method and applications of multilevel modeling, see among others Goldstein (2003) and Luke (2004).

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NEW METHODS FOR COMPARATIVE RESEARCH?

Claude Rubinson and Charles C. Ragin

INTRODUCTION

Shalev's (2007) critique of the use of multiple regression in comparative research brings together and synthesizes a variety of previous critiques, ranging from those focusing on foundational issues (e.g., the persistent problem of limited diversity), to estimation issues (e.g., the unrealistic assumption of correct model specification), to narrow technical issues (e.g., the difficulty of deriving valid standard errors for regression coefficients in pooled cross-sectional time-series models). Broadly speaking, these concerns can be described as epistemological, theoretical, and methodological, respectively. While the distinctions among these three are not always clear-cut, the tripartite scheme provides a useful way to map the different kinds of critiques that may be directed at the use of regression analysis in comparative research. In the first half of this essay we build upon Shalev's discussion to clarify the conditions under which regression analysis may be epistemologically, theoretically, or methodologically inappropriate for comparative research. Our goal is to situate Shalev's specific critiques of the use of multiple regression in comparative work within the context of social research in general.

In the second half of this essay, we focus on Shalev's proposed solutions. We commend Shalev for offering constructive solutions to the problems he

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raises. Too often, critiques end without solutions being offered, demoralizing those who are committed to empirical research. However, we feel that Shalev has overlooked the fact that the issues he raises are addressed more completely and fully in the growing literature on Qualitative Comparative Analysis (hereafter, QCA) and fuzzy-set analysis.[1] We argue that QCA and related methods both encompass and extend Shalev's proposed solutions and provide a strong foundation for systematic, case-oriented comparative research.

THE CRITIQUE OF MULTIPLE REGRESSION

One of the central themes of Shalev's critique of multiple regression is its incongruence with case-oriented analysis. Case-oriented approaches might be preferred for several reasons, in addition to the simple fact that comparativists tend to study small *N*s. For example, case-oriented methods are better suited for the types of questions that comparative researchers typically ask. Unlike multiple regression, case-oriented techniques such as QCA and fuzzy-set analysis are specifically designed to address questions about necessary or sufficient conditions that often motivate comparative research. Furthermore, case-oriented techniques can be used to address causal complexity. Finally, case-oriented methods such as QCA, fuzzy-set analysis, and those recommended by Shalev are more closely aligned with the epistemological orientations held by many comparative researchers. This orientation identifies the case – rather than the variable – as the fundamental unit of interest to social researchers.

The Epistemological Critique

The epistemological critique of the use of regression analysis in comparative research is straightforward: the method results in unproductive representations of social phenomena. Social research is best described as the construction of scientific representations of social life (Ragin, 1994). To the extent that applications of regression analysis result in representations that do not resonate with researchers' understandings, the method is called into question. The primary reason that these representations are found lacking is that case-oriented comparative researchers keep cases, not the net effects of variables, at the forefront of their analyses. It is not that case-oriented researchers dismiss variables, but rather that they perceive that it is not

variables but cases that have relationships with one another. The variable-oriented researcher shows, for example, that poverty is correlated with crime and that economic development is correlated with democracy. The case-oriented researcher observes that criminals tend to be poor, especially the ones that get caught, and that economically developed countries tend to be democratic. Although subtle, this distinction entails fundamentally different views of social phenomena. Where variable-oriented researchers view the social world as a manifestation of the myriad relationships among variables, case-oriented researchers see many different kinds or sets of cases.

For the case-oriented researcher, the problem with regression analysis is that it veils cases. Regression analysis describes the relationships between independent and dependent variables which, from the vantage of case-oriented research, is a limited and fragmented picture of reality. Note that this is not a technical critique of the method's capabilities but, rather, a reaction to the world-view inherent in the method. In regression analysis, cases do not constitute anything in and of themselves; they are merely carriers of information about the relationships among variables.[2] The case-oriented researcher, however, requires methods that maintain the constitution and integrity of the cases under observation. Stated simply, regression is incapable of doing this and, therefore, is an inadequate platform for conducting case-oriented research. Although strongly worded, such a statement should not be controversial. It is not a deficiency of regression that it fails to meet the needs of case-oriented researchers but simply reflects the fact that it meets the needs of variable-oriented researchers so well. Its strength is also its weakness. While comparative researchers tend to be case-oriented, this coupling is not mandatory. Regression analysis is perfectly suitable in the hands comparative researchers who see cases as instances of relationships between variables.

The Theoretical Critique

Regression analysis is best at answering theoretically framed questions about the net effects of competing independent variables on a dependent variable (Ragin, 2006). In a multiple regression model, it is assumed that any single variable is sufficient by itself for achieving an impact on the outcome and that no variable is necessary. Thus, regression analysis is not well-suited for the analysis of causal complexity. As Shalev (2007) notes: "The results will be ambiguous because they will be unable to distinguish between additive effects, conditional effects, and multiple causal pathways." These limitations are especially problematic when comparative researchers attempt

to use regression to answer theoretical questions that it is not designed to answer. Unfortunately, such attempts are far too common. Shalev provides an example in his review of Rothstein's analysis of union membership. Rothstein hypothesizes, in essence, that the presence of the Ghent system is a necessary condition for high levels of unionization. However, he attempts to test this hypothesis by regressing percent union on presence of Ghent, strength of left government, and potential union membership. While a statistically insignificant effect for Ghent might undermine the hypothesis, Shalev (2007) points out that "the regression could not make a positive case for Rothstein's argument." Regression coefficients report the partialed effects of each independent variable on the dependent variable. There is no basis in this type of analysis for privileging the effect of Ghent as a necessary condition for high levels of unionization.

Sometimes it is difficult to correctly identify the method most appropriate for answering a given theoretical question. Consider another study that Shalev reviews, Hall and Franzese's (1998) investigation of the effect of central bank independence on unemployment rates. Shalev (2007) identifies two central hypotheses:

> In nations where wage coordination is high, an increase in the independence of the central bank is associated with a very small increase in the rate of unemployment.
>
> Where wage coordination is low, however, an increase in the independence of the central bank is associated with a substantial increase in the rate of unemployment.

These hypotheses encompass both case-oriented and variable-oriented questions. On the one hand, Hall and Franzese are asking about nations with high versus low levels of wage coordination, a question that is case-oriented in nature. On the other hand, they are asking about the association between central bank independence and unemployment rates, a question that is variable-oriented in nature. This disjuncture results from Hall and Franzese's recognition of the contextual effect of wage coordination. In regression analysis, contextual effects are operationalized through interaction terms. Indeed, from a variable-oriented perspective, the two hypotheses are one. It would be more precise to test the single hypothesis that "as wage coordination decreases, the strength of the positive association between central bank independence and the unemployment rate increases," and, in fact, this is the hypothesis that they test, using an interaction term (Hall & Franzese, 1998, p. 519). Dichotomizing the wage coordination measure permits Hall and Franzese to interpret their results as applying to nations with high versus low levels of wage coordination. Strictly speaking, however, their results only describe relationships among variables.

Case-oriented techniques, by contrast, downplay the relationships among variables and instead emphasize how the countries in the data set constitute 18 combinations of the variables of interest. Shalev (2007) presents a rudimentary configurational view in his Chart 2. Examining Chart 2, what stands out is not the relationship between unemployment rates, central bank independence, and wage coordination but that, with the exception of Australia, all of the states with relatively low levels of wage coordination also have relatively high rates of unemployment. Furthermore, again with the exception of Australia, all countries with relatively low rates of unemployment have relatively high levels of wage coordination. Setting Australia aside, these results indicate that having high levels of wage coordination is a necessary condition for low levels of unemployment and, correspondingly, that low levels of wage coordination are sufficient for high rates of unemployment. Such conclusions naturally lead to a focus on the anomalous case of Australia: why is Australia's unemployment rate so much lower than one would otherwise expect? How does Australia differ from France, which has similar scores on wage coordination and central bank independence? Similar questions are raised regarding Germany, Denmark, Finland, and Norway: these countries all have high levels of wage coordination; why do they also have high unemployment rates? In short, the use of case-oriented techniques disposes the researcher to focus on the characteristics of the cases under investigation rather than the relationships among the variables.

The Methodological Critique

The most well-known critique of the use of regression analysis in comparative research is methodological, the so-called "small-*N* problem." Since comparative researchers generally study only a handful of cases, sophisticated regression techniques quickly exhaust available degrees of freedom. Comparative researchers often emphasize that case-oriented analytic techniques can better address issues of causal complexity than variable-oriented analytic techniques (see, e.g., Rueschemeyer & Stephens, 1997); however, Shalev (2007) correctly points out that:

> The problem is not that MR does not have or could not invent technologies for dealing with such complexities. Nonlinear functional forms, interaction effects and (in time-series analysis) complex lag structures immediately come to mind. The point is that because such techniques are either difficult to employ or impose a steep statistical penalty due to the "small n problem," they are rarely or insufficiently used.

To the extent that regression analysis is ill-suited for comparative analysis due to limited degrees of freedom, then, there are three possible solutions. One is to increase the number of observations available for analysis through additional data collection or a reformulation of the research question (see King, Keohane, & Verba, 1994). A second is to use a technique such as factor analysis or metric scaling to reduce the dimensionality of the model's vector space. The third is to turn to case-oriented analytic techniques that are not directly constrained by considerations of degrees of freedom.

Pooled cross-sectional designs are a common example of the first option. Shalev (2007) cogently describes the methodological problems that can accompany this technique, noting that such designs reflect the limitations of both cross-sectional and longitudinal studies: "pooled designs are the worst of both worlds." Rather than artificially increasing the number of observations by using pooled designs, Shalev recommends reducing the number of causal variables, as illustrated in his discussion of Esping-Andersen's analysis of welfare regimes. Reduction of vector space dimensionality is a long standing recommendation (Berg-Schlosser & De Meur, 1997). However, comparative researchers should be cognizant of the limitations of data reduction techniques such as factor analysis. Specifically, in order to create an index from several causal conditions factor analysis rescales correlated conditions and then sums their scores. The assumption, in effect, is that the different conditions that go into an index are partially substitutable such that any one condition may compensate for any other condition. Thus, factor analysis, like regression analysis, masks causal complexity and veils case specificity. The application of vector reduction techniques such as factor analysis and metric scaling demands theoretical justification; they should not be used as easy, technical solutions to problems associated with limited degrees of freedom. This leaves the third solution to the degrees-of-freedom shortage, which is to use case-oriented methods such as QCA, fuzzy-set analysis, or the methods Shalev proposes. While attractive, this path is not necessarily a panacea, for it carries with it a world-view that emphasizes similarities and differences among cases, not relationships among variables.

Discussion

Shalev reviews a number of arguments as to why regression analysis is often inappropriate for comparative research. The methodological critique is most commonly made, and it is easiest to understand: Comparative researchers frequently study a limited number of cases; under such conditions, the

assumptions of regression analysis are very difficult to meet. The theoretical and epistemological critiques are less frequently made, but are more important because they are directed at more fundamental concerns. The theoretical critique observes that regression analysis is best-suited for answering only certain types of questions regarding relationships among variables. Frequently, however, these are not the types of questions that interest comparative researchers. The epistemological critique observes that regression analysis carries with it a variable-oriented world-view that is incongruent with the case-oriented world-view, which is common, though certainly not universal, among comparative researchers. Taken together, these three critiques point to the need for methods that meet the specific requirements – epistemological, theoretical, and methodological – of case-oriented comparative researchers.

Shalev (2007) writes "MR remains by far the predominant mode of numerical data analysis and most of its critics sees qualitative analysis (whether formal or not) as the only real alternative. This paper seeks to promote a third way." We share Shalev's concern. The conventional division between quantitative and qualitative research techniques tends to hinder – rather than benefit – social research by implicitly limiting case-oriented researchers to qualitative tools and variable-oriented researchers to quantitative tools.

ALTERNATIVES TO REGRESSION ANALYSIS

Shalev largely neglects QCA and fuzzy-set analysis in favor of his proposed methods. In the second half of this essay, we contest this oversight. QCA and fuzzy-set analysis are, in fact, more elaborate and refined versions of the methods Shalev recommends.

Shalev's Critique of QCA

Shalev (2007) suggests that, with regard to comparative research, QCA and fuzzy-set analysis suffer some of the same shortcomings as regression analysis:

> Ragin's methods are not "qualitative" in the sense of relying on the interpretive skills of analysts wading knee-deep in thick description. If anything, as Griffin and Ragin (1994, p. 10) have insisted, QCA is more like MR: both apply rules that are independent of the researcher, and both treat cases as "discrete, multiple instances of more general phenomena."

It is true that QCA shares a few characteristics with regression analysis. Both are formal methods and, as such, are characterized by the application of procedures that are independent of the researcher. But whereas regression is an application of linear algebra rooted in matrix theory (Marcus & Minc, 1988), QCA and fuzzy-set analysis are applications of set theory (Whitesitt, 1995). Set theory is used, very simply, to formalize the logic of comparative analysis, as practiced by case-oriented researchers. The primary goal of the formal procedures implemented in QCA is to prevent researchers from drawing illogical conclusions from comparative evidence, especially when the *N* of cases is more than a handful. Consider the truth table, which forms the foundation of both QCA and fuzzy-set analysis. Superficially, it appears similar to a conventional data set in that it utilizes a "cases-by-variables" format. But the rows of a truth table are not observations as they are in a conventional data set. Rather, each row represents a logically possible combination of causal conditions.[3] It is up to the researcher to determine which of these combinations map onto real-world cases. Frequently, the process of mapping the causal configurations onto real-world cases will prompt researchers to revisit and revise their classification schema, based on in-depth analysis of cases. From the same Griffin and Ragin (1994, p. 10) article:

> To resolve the contradictions[4] in their data, the authors intensively reexamined both the configurations producing contradictory outcomes and the cases in those configurations. They searched for errors in their original classification, thought more deeply about whether their dichotomous measure of labor management practices was too crude, looked anew at their interviews with personnel managers, and strategically compared mills in contradictory configurations with mills in configurations free of contradictory outcomes. All of this interpretive work on classification – really, on the meaning of their outcome factor and its applicability to several of their cases – was but a prelude to their explanatory analysis.

It is through the construction, revision, and refinement of truth tables that QCA and fuzzy-set analysis rely "on the interpretive skills of analysts wading knee-deep in thick description" (see also Ragin & Rihoux, 2004 and the commentary and exchanges it generated in a special issue of *Qualitative Methods* devoted to QCA; see also the three-way exchange on QCA versus regression analysis published in *Studies in Comparative International Development*: Achen, 2005; Seawright, 2005; Ragin, 2005). As with the alternative techniques that Shalev proposes, effective application of QCA and fuzzy-set analysis depends directly upon the researcher's substantive knowledge of the cases under investigation.

Shalev's Tabular Technique and QCA

Shalev's first proposed alternative to regression analysis makes use of tabular techniques. Reanalyzing Rothstein's model of union membership, Shalev clusters countries according to the different combinations of causal conditions that they exhibit. This technique has two benefits. First, it provides a direct test of a hypothesis that conventional regression analysis could not provide, that is, Rothstein's hypothesis that "the highest levels of unionization have been reached only in countries where [the Ghent system] is in place" (Shalev, 2007). Shalev's tabular technique clearly identifies the combinations of conditions linked to high rates of unionization, confirming Rothstein's hypothesis. The second benefit of Shalev's (2007) tabular technique is that, in moving the individual countries to the forefront of the investigation, it also "point[s] the interested researcher to the most fertile questions for selective case comparisons." Shalev's tabular technique leads naturally to the investigation of similarities and differences among cases in a way that analysis of regression residuals does not.

The insight underlying Shalev's tabular technique – that it is combinations of conditions that matter – is the same insight that underlies QCA (Ragin, 1987). QCA is built around the analysis of a "truth table" that delineates the various combinations of conditions linked to the presence/absence of an outcome. As with Shalev's tabular technique, QCA permits the investigation of necessary and sufficient conditions and keeps the individual cases at the forefront of the analysis. QCA has a number of advantages over Shalev's tabular technique. The most obvious advantage is conciseness. As the number of causal conditions increases, tabular analysis quickly becomes unmanageable. A truth table, however, can accommodate a large number of causal conditions. Furthermore, the existence of truth table reduction algorithms provided in software packages such as fs/QCA simplifies the accompanying analysis. Shalev (2007) notes that determining the proper setup of the table "requires some forethought" due to the complexity of the analysis. Researchers using QCA need only define and measure the relevant causal conditions. The method's algorithm identifies the causal configuration(s) linked to the outcome under investigation.

Shalev emphasizes that an advantage of his tabular technique over regression analysis is that it places cases in the foreground of the analysis. QCA does this as well. Using either technique, researchers will not simply determine that high union membership is present in countries with a combination of small size, medium or strong left parties, and the presence of the Ghent system; they can explore additional avenues of investigation: "In

particular, it must be questioned whether the Ghent system alone can explain the very large differences in density between otherwise well-matched countries: Belgium versus the Netherlands, and Sweden and Denmark versus Norway'' (Shalev, 2007). But QCA has an additional advantage in that it forces investigators to resolve contradictions (cases with similar causal configurations that produce divergent outcomes). For example, Shalev simply ignores the contradiction between Switzerland and Ireland: both are small countries with weak left parties and no Ghent system, but union membership is weak in Switzerland and strong in Ireland. QCA forces the researcher to confront such contradictions and decide how to deal with them (see Ragin & Rihoux, 2004; Ragin, 2005). In this way, QCA structures a close interaction between researcher and cases.

Another advantage of QCA over Shalev's tabular technique regards the analysis of counterfactual cases. Shalev (2007) correctly points out that the social world is characterized by limited diversity:

> In cross-national quantitative research the situation is very different [than in survey research]. We often analyze the entire universe of cases, and if not it is usually because of lack of data rather than sampling considerations. For the most part then, *if a particular configuration of attributes does not exist in a cross-national data set, it does not exist at all* (emphasis in original).

Shalev (2007) raises the issue of limited diversity within his critique of regression analysis and comments that ''it cannot be denied that one of the tests of a useful causal model is that it be capable of answering counterfactual questions.'' QCA provides just such a capability, for the analysis of limited diversity is a long-standing focus of the approach (see Ragin, 1987). As detailed in Ragin and Sonnett (2004), QCA includes tools especially designed for the analysis of ''remainder'' causal combinations (that is, logically possible combinations of conditions that lack empirical instances). Such analyses formalize the thought experiments proposed by Weber (1905) by treating the remainder combinations as counterfactual cases. By incorporating the analysis of remainders into QCA, the researcher can better assess the causal role that specific conditions play in bringing about the outcome in question.

Shalev's Three-Dimensional Plots and Fuzzy-Set Analysis

A second technique that Shalev utilizes in his reanalyses of Hall and Franzese (1998) and Garrett (1998) is that of three-dimensional scatterplots, with the third dimension represented as proportionately sized ''bubbles.''

These scatterplots can be seen as nascent fuzzy-sets. Reanalyzing Garrett's data, Shalev (Chart 4) clusters countries according to their degree of capital restriction and trade openness. In set-theoretic terms, these clusters represent subsets. Shalev identifies three subsets: a set of countries with low levels of both capital restriction and trade openness,[5] a set of countries with high levels of capital restriction and middling levels of trade openness, and a set of countries with low levels of capital restriction and high levels of trade openness. Shalev observes that the countries in Garrett's analysis exhibit limited diversity: there are specific regions of the property space that are void of cases. In particular, he notes that there are no cases for the combinations of (a) high left-labor power with low capital restriction or (b) low left-labor power with high trade openness. As Shalev notes, Garrett conducted tabular analyses that included precisely these combinations.

Shalev's critique of Garrett reflects the distinctive manner by which comparative researchers often measure their variables. Garrett (1998, p. 84) employs relative measures of left-labor power, capital restriction, and trade openness: "Low (high) levels of trade and capital mobility refer to the 20th (80th) percentile scores in the sample. Low (high) levels of left-labor power refer to the 20th (80th) percentile scores on left-labor power index." For Garrett, scores are low or high relative to the median; indeed, it would be more accurate to use the labels "lower" and "higher" to reflect this operationalization. For comparative researchers, adjectives such as "low" and "high" generally describe qualitative conditions measured against a defined standard. Consider the set of Western European countries. Although there is certainly variation in GDP per capita among these countries, all may reasonably be considered rich – depending upon how the researcher defines "rich." Case-oriented methods do not evaluate variation in the same way that variable-oriented methods do. In case-oriented research, it is the substantive meaning of the scores that is most important; scores must be calibrated relative to some standard, not simply relative to a measure of central tendency. In qualitative work, measurement is an interpretive process, based on the researcher's theoretical and substantive knowledge.

From this viewpoint, Shalev makes the same general error as Garrett. When constructing his scatterplots, Shalev does not consider the substantive meaning of the various scores but simply accepts them at face value. Examining Chart 4, for example, Shalev (2007) identifies a cluster of social democracies consisting of Sweden, Denmark, Austria, and Norway. Finland is not included in this cluster, presumably due to its higher level of capital restriction. But does Finland's exclusion make sense? Garrett's measure of capital restriction is simply a count of four types of government restrictions

on capital mobility. Excluding Finland from the social-democratic cluster assumes that the raw number of restrictions matters. It is not clear that this is true. For example, in an investigation of foreign exchange market turbulence, Eichengreen, Andrew, and Wyplosz (1995) operationalize capital restriction simply as a dummy variable indicating the presence or absence of *any* capital controls. This operationalization indicates that the researchers believe that capital restrictions are substitutable for one another and, furthermore, that their effects are not necessarily additive. It may be that the difference between Finland's level of capital restriction and those of Sweden, Denmark, Austria, and Norway amounts to nothing more than irrelevant variation, and Finland should be included in the social-democratic cluster.

Shalev's reanalysis of Hall and Franzese (1998, Chart 2) displays the same shortcoming. Hall and Franzese do not justify the dichotomization of their institutional variables, and Shalev appropriately criticizes this oversight. But it is by no means clear that Shalev's strategy of disaggregating the variables is better. Both actions are arbitrary. Shalev's approach assumes that the data – and the variation in the data – speak for themselves. But researchers must always interpret scores and evaluate what they mean. Because Shalev does not find a pattern in Chart 2, he concludes that Hall and Franzese's findings are an artifact of their dichotomizing their measures. But it is also possible that Shalev's lack of findings is a result of his failure to properly calibrate his measures, using theoretical and substantive knowledge to guide the interpretation of scores.

Fuzzy-set analysis forces researchers to calibrate their measures carefully; the resulting fuzzy membership scores must be substantively meaningful. In fuzzy-set analysis, scores indicate the degree of membership of cases in a given set. A country may be classified as fully, partially, or not belonging to the set of countries with, for example, high left-labor power or high capital restriction.[6] After the researcher calibrates membership scores, formal fuzzy-set techniques can be applied to determine the subset relationships that exist among the cases. Shalev derives his clusters using *ad hoc* procedures; fuzzy-set analysis applies set theory to the same end, based on the researcher's interpretation of each case's degree of membership in the relevant sets.

A further difference between Shalev's clustering technique and fuzzy-set analysis concerns the role that the derived subsets play in the subsequent analysis. Shalev's clusters are primarily descriptive. By keeping the cases in the foreground of his reanalysis of Garrett, Shalev's technique permits him to distinguish a social-democratic subset, an autarchic subset, and a

small-state subset. In fuzzy-set analysis, however, subsets are not merely descriptive but also provide a foundation for the analysis of causality. Through the application of set theory and fuzzy algebra, fuzzy-set analysis provides formal methods for evaluating necessary and sufficient conditions.

Fuzzy-set analysis is a variant of QCA; as such, it shares QCA's advantages. Like QCA, fuzzy-set analysis can accommodate a substantial number of causal conditions. Shalev's scatterplots are useful, but it is difficult to visualize a plot with more than three dimensions. Reflecting the fact that his technique grants explanatory primacy to just two dimensions at a time, Shalev is unable to incorporate level of left-labor power into his clusters. Fuzzy-set analysis, on the other hand, locates each case's position in a vector space with a much larger number of dimensions. (In practice, most researchers use from four to nine.) Also like QCA, fuzzy-set analysis makes use of truth tables and provides formal techniques for identifying the various causal configurations linked to the outcome under investigation and for the analysis of counterfactuals.

Discussion

Case-oriented comparative researchers seek explanation by exploring the similarities and differences among cases. The problem with variable-oriented techniques such as multiple regression is that they render cases invisible. At the heart of Shalev's tabular and scatterplot techniques is an attempt to bring cases to the foreground of the analysis in order to facilitate the researcher's case-oriented analysis. We are surprised that Shalev positions his techniques as alternatives to QCA and fuzzy-set analysis when they are in fact rudimentary versions of QCA and fuzzy-set analysis. Perhaps the formality of QCA and fuzzy-set analysis makes these techniques appear inappropriate for case-oriented research. With regard to formal quantitative methods, Shalev (2007) cautions against such a reaction: "provided they fit researchers' theoretical assumptions, there is no reason why inductive multivariate statistical methods should not be exploited by comparativists." We extend this astute guidance to formal qualitative methods. It would be unfortunate if comparative researchers dismissed QCA and fuzzy-set analysis simply due to their formality.

As formal methods, QCA and fuzzy-set analysis provide useful ways of simplifying many of the common tasks that comparative researchers face. In constructing the tabular presentation of Rothstein's data, Shalev faced two tasks: developing the measures of the various causal conditions and building

a useful table showing key patterns. QCA formalizes the latter task, freeing researchers to concentrate on the former. Similarly, in developing his scatterplot of Garrett's data, Shalev had to measure the various indicators, build the scatterplot, and identify the relevant subsets. Fuzzy-set analysis frees researchers to concentrate on the measurement and calibration of set memberships; set-theoretic analysis of configurations of set memberships is accomplished using software. Shalev suggests that QCA and fuzzy-set analysis distance comparative researchers from their cases; in fact, the opposite is true. By formalizing the most difficult analytic tasks involved in comparative research – the comparison of cases as configurations of similarities and differences – these methods free researchers to direct their time and energy toward getting to know their cases well.

QCA and fuzzy-set analysis enhance comparative research by facilitating case comparisons. The analytic process brings contradictions to light and reveals conditions of limited diversity, providing avenues for further study. As noted above, QCA also offers procedures for the consideration of counterfactual cases. Perhaps most important, QCA and fuzzy-set analysis provide methods for the analysis of necessary and sufficient conditions as well as multiple conjunctural causation. These procedures, while formal, remain under the control of the researcher. In this manner, QCA and fuzzy-set analysis offers the transparency desired by comparative researchers while remaining faithful to the theoretical and substantive expertise of the researcher.

CONCLUSION

Michael Shalev's essay is an important contribution to the continuing debate on appropriate methods for comparative research. Drawing upon previously published research, he demonstrates a variety of ways in which the inappropriate application of multiple regression has compromised comparative work. Shalev proposes a number of alternative research strategies better suited to the needs of case-oriented researchers. It is important to note that Shalev's recommendation is not that comparative researchers abandon regression analysis or quantitative methods altogether, but instead that they learn to better match research questions and techniques. We strongly endorse this recommendation.

In the first half of this essay we clarify the various ways in which the choice of method matters. Different research methods embody different epistemological world-views. These different world-views shape the

questions that scholars may ask and, consequently, their results. Changing the research technique, then, can fundamentally alter the research project. In the second half of the essay, we address Shalev's critique of QCA and fuzzy-set analysis. Contrary to Shalev's assessment, QCA and fuzzy-set analysis are case-oriented techniques finely tuned to the needs and practices of comparative researchers. We demonstrate that QCA and fuzzy-set analysis incorporate and extend the insights and techniques of Shalev's recommended methods. Although Shalev positions his methods as alternatives to QCA and fuzzy-set analysis, we find greater similarity than difference among the approaches.

Comparative researchers frequently find themselves in the gulf between small-*N* qualitative studies and large-*N* quantitative studies (Ragin, 2000). Most of the studies that Shalev reviews involve between 14 and 18 countries, numbers small enough to constrain the available degrees of freedom but large enough to hinder in-depth analysis of each case. Case-oriented techniques such as QCA, fuzzy-set analysis, and those developed by Shalev permit the pursuit of both breadth and depth of understanding by assisting comparative researchers in their search for commonalities and differences across cases.

NOTES

1. See, for example, the extensive international bibliography on comparative methodology, QCA, and fuzzy sets at www.compasss.org, which lists more than 250 applications of QCA.

2. It is important to note that this critique does not apply to all quantitative methods. Social network analysis, for example, is both quantitative and case-oriented. Network analytic methods can be used to describe not only the cases within a network but also the overall network (the network itself, constituting a case). Reflecting the case-oriented researcher's concern with the relationships among sets, methods exist to assess the intersections, unions, and divisions within and between social networks. The point here is simply that one should not assume that case-oriented research is necessarily qualitative. Likewise, there is no reason to assume that variable-oriented research is necessarily quantitative.

3. In the article that Shalev references, Griffin and Ragin (1994, p. 10) overstate the resemblance between regression and QCA when they write "So similar are QCA and logit regression in causal epistemology, for example, that the very same data matrix can serve both kinds of analyses." Logit regression would be applied directly to the data set; QCA (or fuzzy-set analysis) would be applied to a truth table derived from the data set. Popular software applications such as fs/QCA automate the transformation of a conventional data set into a truth table, further obscuring this distinction.

4. A "contradiction" occurs when there are cases with identical causal configurations, except that some of the cases exhibit the outcome under investigation and others do not. Notice how the problem of contradictions highlights the difference between a truth table (in which rows represent configurations of causal conditions) and a conventional data set (in which rows represent observations).

5. The text indicates that this subset includes seven countries but only six are presented. We assume that France – which was included in Garrett's original analysis – was inadvertently omitted from this subset and would not change the results of the analysis.

6. Fuzzy scores range between 0.0 and 1.0. A score of 0.0 indicates that a case is fully out of the set of interest while a score of 1.0 indicates that a case is fully in the set. Scores between 0.0 and 0.5 indicate that a case is "more out than in" while scores between 0.5 and 1.0 indicate that a case is "more in than out."

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REJOINDER: AFFIRMING LIMITS AND DEFENDING ALTERNATIVES TO MULTIPLE REGRESSION

Michael Shalev

I greatly value the readiness of the eminent scholars participating in this symposium to debate the issues raised in my paper on the use of multiple regression (MR) in the comparative political economy of the OECD countries. Their thoughtful and often detailed commentaries testify to the existence of healthy differences of opinion alongside a shared commitment to methodological advance. These are encouraging signs of vitality and integrity. At a practical level, I believe our students will learn a lot from the symposium. Readers will of course need to make their own judgments. My comments focus on either clarifying my position where it seems necessary, or identifying what I believe are limits to some of the counter-suggestions made by the symposium contributors.

Most commentators interpreted my paper as calling for a blanket boycott of MR in small-N cross-national research. My intended message was that the costs and limitations of MR outweigh its benefits in comparison with alternative ways of analyzing numeric data. I first summarized the limitations of MR from a case-oriented perspective. Then, building on the existing critical literature on the popular pooled design (the merging of timeseries for multiple countries), I contended that it complicates analysis in often unacknowledged ways without overcoming difficulties that are inherent in using

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linear and additive models to evaluate the effects of many variables on few cases. I noted some theoretically appealing uses of pooled datasets (such as testing how and why cross-country differences alter over time, or why temporal dynamics vary between countries or families of nations), but raised doubts about their viability.

The majority of my paper was devoted to illustrating the limits of MR in a variety of previous works. Through reanalysis of these works, I tried to show the advantages of technically simple exploratory methods of data analysis to be used where appropriate with synthetic variables created by methods of data reduction like factor analysis. These methods were chosen to maximize the potential for dialog between cases and explanations by keeping the cases visible during the data analysis. I argued that such visibility benefits comparativists (both producers and consumers of research) by allowing them to employ their knowledge of individual cases in judging the adequacy of measurement and the fit between data and conclusions, and also in identifying cases that merit closer study.

Most of the papers in this symposium fall into three groups. In two cases, the contributors largely or fully agree with my criticisms of standard regression approaches but believe that there are better ways of obtaining the benefits claimed for my proposed methods of analysis. Rubinson and Ragin advocate formal analytical methods based on Boolean or fuzzy-set algebra. Esping-Andersen proposes sidelining the conventional approach to MR and instead tapping the power of regression diagnostics. Two other contributors are sympathetic to some of my criticisms of MR but contend that practitioners are actually much more aware of these difficulties than I admit. They also believe that recent work using the pooled design has made successful efforts to overcome the problems which I identified, tapping the power of pooling to address theoretically interesting questions. Pontusson shows that modified pooled regressions have been insightfully used to address important topics like variation in causal processes over time and across types of countries. Similarly, Swank demonstrates that a number of major studies have succeeded admirably in cross-fertilizing both theory and qualitative case studies with pooled regression analysis.

Two other commentators also believe that MR has merit in comparative research, but (like Esping-Andersen) contend that it needs to be used more appropriately. Lane Kenworthy contributes to the project of improving the best practice of regression users by offering practical advice on how to deal with a variety of important issues, many of which were also raised in my article. I endorse Kenworthy's suggestions, but believe that some of them are more radical – and therefore less likely to be adopted – than he seems to

assume. In addition, while appreciating his efforts to bridge the divide between case and variable-oriented scholarship, I am less confident than Kenworthy that it is possible to accommodate the case-oriented critique within the framework of MR. Scruggs clearly thinks otherwise. At the same time, and in contrast to Kenworthy, he mounts a vigorous critique of my advocacy of case-oriented methodological principles, such as intimacy between analysis and cases and sensitivity to causal complexity. Because we differ on crucial points, a substantial part of my response will be devoted to Scruggs' paper.

The remaining commentary, by Rothstein, is distinctive in that unlike the other symposium authors, his work was one of the targets of my critique on the use of MR in comparative research. For this reason, his readiness to take part in the debate is especially welcomed. Moreover, there is much methodological and theoretical wisdom in Rothstein's remarks. Unfortunately, though, he misinterprets my treatment of his classic 1990 article on the effect of the "Ghent system" on union membership and writes as if my intention had been to offer a definitive answer to that perplexing question. (The same error motivates Scruggs' comments on this aspect of my article.) However, I was pursuing the more modest goal of showing that the purpose for which Rothstein originally invoked MR would have been better served by an exploratory tabular analysis. Rothstein points out that other sections of his paper, as well as other publications, offer a more nuanced and persuasive account of the causal role of the Ghent system. I am sure that he is correct, but the question at issue in my article was what can and cannot be learned from the use of MR in the specific study that I reviewed.[1]

THE SAME THING, ONLY BETTER?

At first sight the reader may find it odd that I have grouped the commentaries by Esping-Andersen and Rubinson/Ragin together, given that while the former proposes revamping the use of MR in comparative research, the latter offers a radical alternative. Nevertheless, while suggesting different solutions, both largely agree with my diagnosis of the problems. Also, my principal response to both is that their practical proposals look promising, yet are difficult to judge. That would require, (a) a user-friendly guide to implementing the advocated techniques; and (b) side-by-side comparison of the results obtained by their favored methods, the conventional MR method, and my own suggestions. Let me hasten to add that given (a), I would be ready to undertake the work involved in generating (b).

Rubinson and Ragin fill an acknowledged lacuna in my article by providing a valuable exposition of QCA/FSA (Quantitative Comparative Analysis and Fuzzy-Set Analysis). In addition, their paper elegantly and forcefully recapitulates and enriches my critique of MR, helpfully distinguishing between epistemological and methodological problems. They also believe that there is a genuine theoretical conflict between case and variable-oriented questions in comparative research, but I find this less convincing. In the background of variable-oriented research linking abstract causes and effects across many countries, there is often a burning desire to test generalizations inspired by the historical record of a particular country (Sweden is a favorite). At the same time, the sought-after end products of Ragin's methods of analyzing cases are generalizations, which specify values of the independent variables that predict a given value of the dependent variable. The theoretical questions driving case and variable-oriented research are thus not as distinct as Rubinson/Ragin suggest, but their discussion of this point is nevertheless illuminating in clarifying the comparative advantages of each approach.

I largely concur with Rubinson and Ragin's main claim that the methods which they advocate are "more elaborate and refined versions" of the exploratory techniques which I favor. There are two different reasons why my article gave only passing attention to the comparative-analytical methods developed by Ragin. First, I wanted to showcase an alternative to MR that was not already well-recognized in the literature. Second, never having actually worked with QCA or FSA, I felt unqualified to discuss them in any depth. I am still undecided about the potential value of these methods. It is not easy to learn them, because of limited documentation and buggy software.[2] Fortunately a growing number of studies in the general area of comparative political economy illustrate the use of QCA/FSA in practice, and a few usefully include the results from regression analyses as well (Ebbinghaus & Visser, 1999; Katz, vom Hau, & Mahoney, 2005; Nelson, 2004). However, some of the available examples of Ragin's methods, including his own studies of welfare state variation, have yielded rather disappointing results. In an early study using QCA, Ragin (1994b) was placed in the awkward position of having to assign one-third of his countries to a "spare" category, which effectively excluded them from the analysis. A subsequent effort using FSA (Ragin, 2000, Chapter 10) yielded a bewildering variety of different results, leaving this reader at least with the impression that the method was stretching the capacity of four explanatory variables arrayed against 18 cases.

Rubinson and Ragin level a similar charge against the tabular and graphical methods which I support, pointing out that they would be

hard-pressed to deal with more than three independent variables. It may be that the two approaches can be profitably employed in parallel, and not only for this reason. Combining both methods would prevent us from having to choose between case visibility and an impartial method of linking causes to cases. Judging from Rubinson and Ragin's description of how their methods are used, cases are only brought into the picture if the software yields surprises like finding more than one causal configuration for a single case. The actual process of discovering causal relationships is a black box. While they regard it as advantageous for researchers to leave it to software to come up with the answers, I am less certain of this. Given our rather primitive abilities to theorize and measure, it would be unwise to sacrifice human ability to judge the empirical adequacy of causal generalizations by applying expertise and common sense. Researchers (and their readers too) will be greatly helped in this respect by being able to view cases in relation to one another and their presumed causes, rather than relying on an automated algorithm to make the decisions. Accordingly, although QCA/FSA and the exploratory methods advocated in my paper may well represent two different methods of implementing the same approach, in contrast to Rubinson and Ragin I believe that each method has both advantages and disadvantages. I hope that future studies will exploit this complementarity.

Before leaving Rubinson and Ragin, it should be noted that we disagree regarding a specific but important element of my paper, namely the role which it advocates for methods of statistically summarizing affinities between multiple indicators. In principle, factor analysis and related techniques could be used for what they call "reducing the number of causal variables". However, that was not the purpose of the factor analysis which I carried out on Esping-Andersen's original welfare states dataset. Instead, my declared intention was to *validate* his typological classification of the *dependent* variable (the three welfare regimes). Moreover, Rubinson and Ragin exaggerate when they suggest that variables which load similarly on the same factor are "substitutable" and that, as a result, this technique suffers from the same problem of insensitivity to configurations that bedevils MR. First, even after rotation is performed it is not uncommon for the same indicator to load on more than one factor, and for these multiple factors to have quite different meanings (and causes). Second, configurations can be effectively described using combinations of factors. For instance, my analysis of welfare regimes showed that social-democratic and liberal countries share similarly negative values on "corporativism" while being located at opposite ends of the institutional/residual continuum famously described by Titmuss (1958).

Esping-Andersen himself seems to agree that my factor analysis-based replication of the analysis in his 1990 book is superior to the MR-based original. He also clearly shares my jaundiced view of the way that MR is actually practiced in cross-national studies. Nevertheless, he claims that there is a better way of doing regression, one that puts a priority on the use of diagnostic techniques. In the process, his essay offers an excellent survey of problems that challenge causal analysis of *any* kind in cross-national research, and how econometricians try to deal with them.

Esping-Andersen's recommendations can be divided into two different categories. Much of his commentary advises us to utilize sophisticated statistical techniques to identify causality issues and, where possible, to employ equally sophisticated techniques for resolving them. For instance: given causal feedback, correct for endogeneity; given selection bias, generate the missing counterfactual causal configurations using "statistical distributions".

Is this a practical agenda for comparativists? Diagnosing causality issues turns out to be far from trivial. It is discouraging to read, for instance, that statistical techniques identifying simultaneous causation cannot be used in small-N studies. Equally worrying is Heckman's observation, quoted by Esping-Andersen, that selection bias can only be reliably corrected in circumstances where it is not a problem to begin with. Another example, as Esping-Andersen points out, is that inferring causal relationships from cross-sectional comparisons is problematic if in the course of time the dependent variable feeds back onto the explanatory variable. The problem is that cross-national researchers lack sufficient data points to evaluate simultaneity using timeseries analysis, and in any event, many of their key (institutional) variables do not change much. This is of course only one of the many limitations of timeseries analysis for cross-national research. Indeed, the larger paper cited in Esping-Andersen's contribution to this symposium (Esping-Andersen & Przeworksi, 2001) provides a comprehensive catalog of the perils involved, including those noted in my article.

In sum, Esping-Andersen's first line of defense leaves me more pessimistic than ever about the utility of MR. Problems are astutely identified. Regression may or may not be able to uncover the problems, and workable solutions are especially hard to find. Fortunately, though, Esping-Andersen has a second string to his bow, which is the suggestion that MR users pay less attention to regression coefficients and more to residuals. By purposefully adding "dialogue with the cases" to the power of MR, this approach seems to overcome the tension between case and variable-oriented analytical strategies. However, when Esping-Andersen writes that "residual plots are a

minefield of information", he inadvertently raises the question of whether they are indeed a mine of gold rather than a field of buried explosive devices! It is difficult to answer this question without seeing concrete examples of how residual analysis is or could be used in comparative research, but some problems can be anticipated.

One of Esping-Andersen's strongest arguments on behalf of analyzing residuals is that if countries influence one another or share common traditions, their prediction errors are likely to cluster. While this is undoubtedly true, I suspect that informal familiarity with cases is more likely than MR to *inspire* insights like the diffusion hypothesis or the existence of "families of nations". At the same time, if the theory underlying MR is accepted, working with residuals may not provide a convincing *test* of such propositions. The virtue of the probabilistic approach built into the conventional way of doing regression analysis is precisely that it expects to uncover only broad *tendencies*. The assumption is that residuals may be influenced by measurement error, omitted explanatory variables and idiosyncratic features of the cases. In contrast, residual analysis of the kind that I understand Esping-Andersen is advocating could encourage reading too much into prediction errors (an issue raised by Scruggs). This is the kind of fear that motivates criticism of techniques like QCA, which strive for a perfect fit between cases and explanations. A further limitation of residual analysis is that if explanatory variables are inter-correlated, as they often are in cross-national research, the apparent predictive ability of each of the causal variables depends on the sequence in which they are entered into the regression.

These considerations point to advantages of the approach adopted in my reanalyzes of Rothstein and Hall/Franzese. This approach forfeits both the benefits and the burdens of precision by using broad categorical measures. It seeks out configurations of explanatory variables by cross-tabulating these measures. The resulting tables or charts make it possible to identify what combinations of attributes actually exist, how they apparently influence outcomes, and which anomalous cases or focused comparisons are worth pursuing in greater detail. The first and last of these three benefits seem more likely to emerge from the type of exploratory analysis that I advocate than from analysis of residuals.

POOLED REGRESSION REHABILITATED?

The contributions by Pontusson and Swank both argue that while pooling over-time and cross-country data has its problems, a large body of

sophisticated work in comparative political economy uses this technique responsibly and effectively. Pontusson highlights extensions to the pooling approach, which have greatly enhanced its value to comparativists. Swank shows that leading researchers actually follow many of my suggestions and prescriptions in conjunction with the use of pooled regression models. Both of their contributions are a useful antidote to my pessimistic view of the value of MR, and they may be correct that it is a more valuable tool than I admit.

In reviewing the use of pooled timeseries cross-section (PTSCS) models, my article emphasized that: (1) it cannot be assumed that dynamic and comparative-static (longrun) causality are identical, (2) the statistical advantages of simultaneously analyzing multiple country timeseries may be illusory, and (3) the technical complications inherent in pooling have spawned a Sisyphian spiral of critique and refinement, forcing practitioners to face an ever-rising learning curve.

Jonas Pontusson counters the first of these criticisms by contending that it must logically be the case that causes which hold over time also hold at the level of enduring cross-national differences. A supportive example would be the Swedish story as told by Korpi (1983), in which a country consistently dominated by left governments developed a comprehensive welfare state, beginning with a historic rise in left power that permanently altered the parameters of policymaking. Pontusson's argument that longrun effects logically embody the accumulated shortrun effects of the same explanatory variable does not necessarily hold, however. As Esping-Andersen suggests in his contribution to this symposium, both social democracy and the welfare state in Sweden could be the result of a common historical antecedent (cf. Therborn, Kjellberg, Marklund, & Ohlund, 1978). Alternatively, contemporary welfare state diversity may mirror the path-dependent effects of differential responses to one-off events like the Great Depression or World War II (e.g. Klausen, 1998). On the other side of the equation proposed by Pontusson, shortrun fluctuations in social expenditure may be driven by forces (such as election cycles or incrementalism) that have no causal relevance to the question of why some countries have enduringly bigger welfare states than others. Consistent with these reservations, Kenworthy's contribution to the symposium provides a convincing empirical illustration of the fact that different types of variation in welfare state spending may indeed have different causes.

Pontusson's main contention is that pooling potentially opens up new lines of empirical enquiry that allow us to tap what are arguably the most interesting types of questions confronting comparative researchers. Do

causal dynamics vary across different families of nations? Does the weight of factors that explain cross-national differences vary between different time-periods? Can we explain why causal relationships at the individual level vary across different national contexts? I agree with Pontusson in this respect. My paper applauded Western for trying to address the first question and criticized Hall and Franzese for failing to address the second. But I also emphasized that there are reasons to be skeptical whether pooling is more beneficial than simply inspecting the coefficients obtained from independently estimating regressions for different countries or time-points. Indeed, I suggested that "borrowing strength" could result in the statistical invention of non-existent effects.

My article did not address multilevel (also known as hierarchical or random-coefficient) models, the third type of suggestion made by Pontusson. These models facilitate the use of national characteristics to explain cross-country differences in individual-level effects.[3] The same reservations that my article raised in connection with Western's hierarchical pooled modeling apply to this design as well. One obvious concern is whether the heavy artillery of multilevel modeling is worth the effort. The first study to fully implement a complex multilevel design on Luxembourg Income Study data yielded findings of great importance for the study of welfare states (Mandel & Semyonov, 2005). However, reading the article in question one discovers that the elaborate statistical analysis produced results that are essentially no different from, and if anything less informative than, those presented in simple tables and scatterplots. This example sums up my overall response to Pontusson's commentary. While the extensions of pooling to which he draws attention indeed address important questions and have generated notable findings, I am not convinced that the pooling *technique* was a necessary means to this end. Pooled models may be useful for concisely summarizing contextual effects established by less sophisticated and parsimonious methods, such as "manually" comparing country-by-country or year-by-year regressions. But the credibility of these summary results depends on the strength of the underlying evidence.[4]

Duane Swank's paper is similar in spirit to Pontusson's but different in substance. Swank provides an enlightening survey of five major works in comparative political economy, which in his view were bypassed or undersold in my article. For the record, I should state that in preparation for a much earlier iteration of my article I drafted critiques based on close readings of three of these five books, those by Boix, Iversen and Garrett. For reasons of space, except for comments on Garrett's study these critiques were not included in the published version, although they were shared

privately with the authors and portions were presented at conferences and seminars. Briefly, in my view all three books suffer from an exaggerated belief in the power of PTSCS models. One reservation, discussed above in my response to Pontusson, concerns the importance of distinguishing between longrun and shortrun causality. Another is the dubious validity of using regression models (pooled or otherwise) to predict outcomes that represent non-existent causal configurations.[5] Boix and Garrett derived their most important empirical evidence on the basis of both of these questionable practices; Iversen relied only on the first.

Although Swank points out that Boix made effective use of charts, and also that his book dwells at length on two cases that drive his key quantitative findings, this does not alter the fact that Boix's pooled regressions and simulations suffer from the very same flaws which I claim are typical of pooled regression analyses. Moreover, while both Boix and Iversen enhanced their books by including case study chapters, Swank and I disagree on their importance. I find it striking that rather than building up generalizations from individual case studies and targeted case comparisons and then testing them statistically at lower resolution (across many cases), the authors relegated their qualitative material to later chapters, after the quantitative evidence was presented. However, I concede that my impression could have been mistaken. Swank may be correct that, particularly when the books by Hicks and himself are considered, major studies that relied on pooling have utilized case materials in fruitful dialogue with their statistical inferences. Needless to say, this in itself does not necessarily mean that their conclusions are correct,[6] but it does suggest that triangulation is more widely practiced than I acknowledged in my paper, and that as a result my pessimism on this score may not have been justified.

IS THERE A CASE FOR BEING CASE-ORIENTED?

Lyle Scruggs' contribution to the symposium offers a spirited defense of MR in comparative research. He claims that the problem is not MR itself, but the fact that it is practiced poorly. Indeed, he writes "statistical analysis is used atrociously in a lot, if not most, comparative social science". According to Scruggs, standard textbooks on regression already offer solutions to pseudo-problems that I raise, or else issue clear warnings against committing genuine errors in the practice of MR to which I draw attention.

In addition, and more fundamentally, Scruggs rejects the core ontological assumptions of case-oriented comparative analysis, claiming that they

"really undermine any attempt at explanation or verification in the sciences". However, what these assumptions actually challenge, and indeed seek to undermine, are over-simplistic explanations and inappropriate methods of verification. Specifically, my critique of MR practitioners is twofold. First, within the terms of their own epistemological discourse, they nearly always overstate their causality claims. Second, and more importantly, core features of the MR method are likely to burden rather than benefit macro-comparative researchers seeking to uncover or test for causality. I interpret Scruggs as agreeing with the first claim but strongly rejecting the second.

Scruggs takes issue with the view, most clearly articulated in Charles Ragin's work, that macro-comparative researchers should prefer methodologies which take it for granted that (a) a given outcome may be located at the end of more than one causal path, and (b) causal effects may be conjunctural (dependent on the broader constellation of conditions in which they are embedded). Scruggs distorts the first of these assumptions, asserting that it "makes any causal explanation largely irrefutable". In fact, the notion of multiple causal paths simply means that a given causal condition (or configuration) may be sufficient without being necessary. Scruggs also misinterprets the logic of conjunctural causation, contending that it is ultimately bound to lead to particularistic explanations ("irreducible differences in the cases themselves"). However, the main point is that adjectives matter. For example, capitalism may be authoritarian or democratic, and democracies can be two-party or multiparty. In each case, the nature of the coupling between capitalism and the political system could alter how "generic capitalism" affects the size of the social budget or the likelihood of a general strike. Because the real world of OECD countries contains a limited number of bundles of attributes, Scruggs' fears are unfounded. There may be main effects along with interaction effects (authoritarianism may exacerbate capitalism's tendency to immiserate the capital-poor), or there may only be interaction effects (it could be that proportional-representation systems inherently check capitalism's inegalitarian nature while parliamentary systems do not). None of this means that every country requires a unique explanation.

Scruggs warns that considering causes to be embedded in bundles could degenerate into giving up the aspiration to prioritize causes and identify decisive factors. This connects to a concern raised by Pontusson, that in-depth case studies should not be sacrificed in favor of using the results of case studies solely to establish superficial patterns in the data (whether via MR or QCA). I agree with both comments. In this spirit, when discussing

Rothstein's work on the causes of variation in trade union density, I emphasized that a logical next step after drawing conclusions from the visual clustering of cases and variables generated by my reanalysis would be to carry out paired case comparisons, which hold the promise of clarifying how much the Ghent system matters. A second type of enhancement advocated elsewhere in my paper (when discussing triangulation) was historical process-tracing, which has the unique promise of pinning down sequentially what it is that brings bundles of attributes together in the first place.

Oddly enough, after critiquing my efforts to draw attention to conjunctural causation and causal heterogeneity, Scruggs goes on to contend that MR is perfectly capable of handling these complications. He also claims that alternative methods, including those which I propose, are less rather than more appropriate than MR. I believe that he is mistaken. By his own admission, for MR to uncover the effects of causal configurations, researchers must know in advance what they are looking for. Herein lies the problem. Our theories can sometimes flag promising interactions, but they could turn up anywhere. Both informal qualitative comparisons like mine and Ragin's formal methods suggest that this problem should be addressed through a collaborative dialog between case evidence and received theory. However, as a committed deductivist Scruggs cannot accept the contaminating effects of such an approach. In line with the recommendations of King, Keohane, and Verba (1994), he proposes that scholars should either divide their data between the exploratory and testing phases of research, or else mobilize hitherto unexploited data that are also capable of addressing testable implications of their theories. The former counsel is often unhelpful to small-N researchers, and the latter is what has led many of them into a misguided romance with pooling.

Scruggs also errs in his critique of the specific reasons why I claim that MR is poorly suited for a world in which causes are bundled and a given cause can have varying effects in different contexts. Contrary to his assertion, case-oriented analysis does not suffer from a burden analogous to the loss of degrees of freedom that occurs when MR models add interaction terms. The reason is that it is only in the latter that interactions must be tested by adding what Scruggs calls another "moving part" to the model. Consider again Rothstein's study of unionization. My approach, which searches for configurations actually present in the data and does not attempt to make inferences to non-existent combinations of the explanatory variables, reveals that the effect of the Ghent arrangement can only be assessed in two specific clusters of countries, which are small and characterized by either medium or strong left party power. We can easily calculate from my

Chart 1 that the mean difference between Ghent and non-Ghent countries is larger in the countries with a medium left, suggesting an interaction. This inference is based on comparing four pairs of countries.[7] A regression modeler with a hunch that an interaction might be found along these lines, would presumably need to add three interaction terms to the model (Ghent∗size, Ghent∗government, and Ghent∗size∗government). This would offer the dubious benefit of allowing her to estimate the effects of all possible combinations of these three causal variables. Dubious, because as already noted, Ghent is only found in a very limited region of the parameter space. Since the case-centered approach does not aspire to explain empty cells, treating causation as conjunctural therefore amounts to anchoring our empirical generalizations in *more* cases (only those countries that actually populate each constellation of variables).

Scruggs' claims that causal heterogeneity "is precisely what multiple regression allows for" is especially misguided. He uses a hypothetical example to show that two explanatory variables, each of which correctly predicts the outcome for only some cases, may yield poor predictions alone while together explaining most or all of the variance. On the face of it, this is a resounding vindication of the additive model. However, the only reason this example works is that Scruggs conveniently uses only two independent variables and forces all cases to take on dichotomous values. (Rather ungraciously, Scruggs then criticizes non-MR researchers – presumably, QCA users – for dichotomizing their variables and taking a deterministic view of causation!) Furthermore, the coefficients on which regression analysts rely for their conclusions tell us the relative weight of each predictor, but not which cases it predicts. This is of course precisely why Esping-Andersen suggests in his commentary that when doing MR we should pay less attention to coefficients and more to residuals.

In Scruggs' fictitious example the two explanatory variables, A and B, have identical values in three cases while each of them uniquely predicts two other cases. In these unusual circumstances, analysis of residuals would work very well. But supposing, as case-oriented analysts do, that where there are multiple causal paths, each represents not one single variable but a configuration of several. Imagine also, as these analysts would, that at least one of the explanatory variables appears in several different causal configurations, each time with different effects. (See Ragin (1994a) for a textbook example along these lines.) *Given* such a model, an MR equation with appropriate interaction terms could be a parsimonious way of summarizing and verifying it. But not *revealing* it. Inspection of residuals is equally unhelpful under these circumstances unless we have a good idea in advance,

which are the conditioning variables and what cutoff points should be used to build the sub-groups for which meaningful comparisons of residuals could be conducted.

Finally, Scruggs seeks to undermine the credibility of my overall claims by exposing alleged errors and omissions in my reanalyses of earlier works. This is not the place for an itemized defense, but I do want to make two general points. The first is that a number of Scruggs' criticisms result from misreading my intentions. He chides me for not testing competing explanations on new ("external") data. However, the purpose of revisiting the works discussed in my article was to show that, using the same data, (a) their questions could be better answered with alternatives to MR (Rothstein; Esping-Andersen); or (b) technical innovations intended to overcome the limits of MR in comparative research actually fail to do so (Hall and Franzese; Garrett; Western). In evaluating Esping-Andersen's study, I concentrated on his conceptualization of the dependent variable, testing for the existence of welfare regimes by submitting a large number of policy indicators to factor analysis – in the process, turning "few cases/many variables" into a benefit instead of a burden. Disappointingly, Scruggs has nothing to say about the merits of this approach. Instead, he disputes the accuracy and validity of Esping-Andersen's original indicators and my decision not to utilize some of them in the factor analysis.

Overall, Scruggs' commentary exemplifies the chasm that continues to divide so many variable-oriented and case-oriented researchers. For example, he believes that residual analysis is a good thing, but only as a way of "examining assumptions" and not (as suggested by Esping-Andersen) in order to identify countries (with names!) that have something in common, which is unpredicted by the regression or is at odds with its assumption of independent errors. Similarly, Scruggs prefers broadly applicable generalizations to conditional ones and fears "ad hoc'ism". Are these simply differences in epistemological "tastes", or is it correct to believe (as I do) that a case orientation is fundamentally better suited to the type of investigations carried out by comparative political economists? Scruggs' preference for playing it by the (econometrics) book sometimes results in helpful reminders that we need to discipline our inferences. But it more often strikes me as stubborn loyalty to principles unsuited to cross-national research. To reiterate, a small and finite universe and what Ragin summarily calls causal complexity frequently make it impossible or impractical to separate exploration from testing, to hope for prediction errors that contain no systematic biases, or to aspire to discover novel explanations that hold broadly across all cases.

Ironically enough, along with what I regard as his exaggerated optimism concerning the suitability of MR to comparative research, Scruggs offers a distressing characterization of the realities of quantitative comparative research, in which practitioners unaccountably fail to abide by the rules clearly inscribed in econometrics textbooks. Scruggs concurs with my contention that repeated cross-sections in pooled models often add no useful information. He also agrees that it is a misuse of regression coefficients to "predict cases outside of the range of observed X's". Similarly, Scruggs makes it clear that much of the scientific veneer of "official" presentations of regression results is illusory. It is typically not the case that the model was born pristine from theory before ever meeting the data that underlie the reported findings, without any trial-and-error process of refinement. Similarly, when an observed coefficient is consistent with a researcher's hypotheses, few of them resist the temptation to refer to this as evidence of a "causal relationship".

Responding to the prevalence of regression malpractice, Scruggs suggests more than once that it is "an interesting question" why reputable scholars fail to use MR responsibly, but he offers no answers. My own seat-of-the-pants explanation is threefold.

1. Researchers who use regression often forget about fundamentals because they are preoccupied with technique. Some hope to gain attention by introducing something that is hot in econometrics but which has not yet reached their own discipline. Others worry too much about getting their standard errors right, lest they be unveiled as charlatans or fools sometime in the future.
2. Peer review does not always work because it focuses too much on whether state-of-the-art techniques are being applied, and not enough on whether the results are robust to varied methodological assumptions, or whether they make sense when scrutinized against the data used (which are usually not made available to reviewers anyway).
3. Whatever their private skepticism, for the sake of their own professional reputation and the prestige of their entire occupational community, participants in the production of scholarly literature have an interest in preserving an image of scientific respectability.

As Scruggs points out, more than one econometrician (my personal favorite is Leamer) have exposed the emperor's nudity. But few of us have had the temerity to advise him to put on a bathrobe, because we are too well socialized and have strong vested interests in not doing so. (I need to confess

to my own status as an occasional participant in this game, as well as a critic.)

No doubt good advice and better training would help to close the gap between the theory of MR and its practice in comparative research. Yet, given the realities just described, I am less optimistic than Scruggs on this score. Some of Kenworthy's recommendations also strike me as somewhat unrealistic, particularly his suggestion that researchers reveal the iterative process by which they use MR to arrive at their final model. Since this would publicly expose the backstage data-mining that goes on behind most front-stage hypothesis-testing, it seems unlikely to take root. Interestingly enough, because Kenworthy agrees that "understanding the cases" is the key task of macro-comparative research, he is not bothered by the prospect of giving up the deductive pretensions of mainstream quantitative studies. Indeed, his own recent work relies mainly on effective use of descriptive and exploratory methods of data analysis (Kenworthy, forthcoming), unlike many of his earlier publications that were based on advanced MR techniques without transparency of the kind that he now advocates (e.g. Kenworthy, 2002, 2003). Similarly, Pontusson freely admits that regression coefficients are "not really about … causal relationship[s]" and that "they themselves must be explained". However, the impressive papers he has coauthored that are cited in his commentary follow the convention that causal effects have been confirmed or disconfirmed.

In contrast to the gaps that both Scruggs and Kenworthy portray between the theory and practice of MR, when reading Pontusson's and especially Swank's upbeat reports on methodological advances in comparative political economy, one gets the impression that the errors and excesses of earlier implementations of pooled regression are now a thing of the past. In this view, recognizing that regression can offer no more than a crude representation of complex realities, researchers now routinely fill in gaps by other means, nuance their findings and theories, and use qualitative research to corroborate quantitative results. Against this, I continue to be struck by the excessive faith in econometric technique that is evident in published papers and books relying on MR, and indeed in many of the contributions to this symposium. It should not be forgotten that the leading political science journals in Europe and the USA repeatedly publish articles (which I cited) claiming to expose egregious statistical errors and omissions that allegedly invalidate what was previously thought of as state-of-the-art research. At the same time, we should also remember that even the wisdom of econometricians is not infinite. In this connection, I again urge that attention be paid to Maddala's pointed warnings to political methodologists a decade

ago (Maddala, 1997). Swank contends that I misquoted Maddala and he also downplays Maddala's criticism of Beck and Katz, presenting it as a run-of-the-mill difference of opinion between experts on a fine point of technique. Both claims are unfounded.[8]

In conclusion, while encouraged by the actual or potential advances in the use of MR that have been reported or advocated by symposium participants, my own view, like Maddala's, is that "I do not think the uncritical adoption of econometric methods in [comparative] political methodology is a good development" (Maddala, 1998, pp. 81–82). Exploratory techniques may be better suited to cross-national research than formal methods of analysis, including MR. At the very least, they should be utilized alongside these other methods and treated as the legitimate and uniquely appropriate tool that they are.

NOTES

1. It should be emphasized that my paper made it clear that "Rothstein's article was primarily based on comparative-historical analysis". It was also noted that he himself had "low expectations" from the regression analysis. A more specific instance of how both Rothstein and Scruggs misinterpret my intentions is their belief that I criticized Rothstein for not persuasively theorizing the Ghent-unionization relationship. Actually, observing that Rothstein himself questioned the theoretical adequacy of several of his independent variables, I pointed out (following an elementary principle of regression analysis) that if he did not believe these claims were true he should not have included them in the model.

2. Anecdotal evidence to this effect emerged from my experience in teaching comparative methods at the Oslo Summer School in July 2006. Although several of the participating graduate students had previous experience with the fs/QCA software my class and I were unable to implement an elementary example. It is especially unfortunate that no tutorials are yet available.

3. See the special issue of *Political Analysis* (Vol. 13, No. 4, 2005) on multilevel analysis, edited by Kedar and Shively.

4. The carefully crafted studies by Pontusson and his collaborators cited in his present paper furnish good examples of this axiom. Pooling only countries that belong to the same "variety of capitalism" (Rueda & Pontusson, 2000) is a definite advance on studies that aggregate the entire OECD bloc, but the article in question lacks evidence that the differences in effects "between-varieties" indeed exceed the "within-varieties" variation. Similarly, periodizing effects on the basis of a moving window analysis (Kwon & Pontusson, 2005) introduces welcome temporal conditionality, but in the absence of year-by-year evidence the validity of the periods chosen is difficult to judge.

5. The results of such simulations might become valuable when embellished by additional evidence and reasoning, as in the type of counterfactual thought

experiments advocated by Fearon (1991) and helpfully recalled in this symposium by Esping-Andersen.

6. In this connection it is sobering that three different case studies suggest that Boix's reading of the Spanish case, which was close to Socialist Party's interpretation, was deeply flawed (Etchemendy, 2004; McVeigh, 1999; Perez, 1999).

7. Readers who carry out this exercise for themselves will notice a further advantage of the transparency of the cases in the type of exploratory analysis illustrated in my Chart 1. Although the comparison of means affords strong evidence of interaction, the countries in one of the averaged pairs (comprising the Netherlands and Australia) are seen to have very different values on the dependent variable, alerting us to the fact that the apparent interaction holds only for the Dutch case.

8. After enumerating the many "basic issues to be tackled" in pooled models, Maddala (1998) stated: "These issues have been discussed in Beck and Katz (1996) for the benefit of political scientists. But their prescriptions are not, strictly speaking, correct." (p. 60). He went on to describe Beck and Katz's famed (among political scientists) method of panel-corrected standard errors as "sweeping the problems under the rug", adding however that some other errors made by Beck and Katz' are only "minor issues" (p. 61). The citation in my article accurately indicated that my quotations from Maddala were drawn from these two different pages of his article.

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