SOCIAL CLEAVAGES, POLITICAL INSTITUTIONS AND PARTY SYSTEMS: PUTTING PREFERENCES BACK INTO THE FUNDAMENTAL EQUATION OF POLITICS

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Abstract

Do the fundamental conflicts in democracies vary? If so, how does this variance affect the party system? And what determines which conflicts are salient where and when? This dissertation explores these questions in an attempt to revitalize debate about the neglected (if not denigrated) part of the fundamental equation of politics: preferences. While the comparative politics literature on political institutions such as electoral systems has exploded in the last two decades, the same cannot be said for the variable that has been called social cleavages, political cleavages, ideological dimensions, and—most generally—preferences.

The dissertation revisits the ways in which preferences, the societal inputs into the political process, interact with political institutions to shape party systems. It lays conceptual groundwork by drawing upon the constructivist literature; evaluates the literature that attempts to account for variance in the number of parties competing in elections; develops new measures of the conflicts both dividing political elites and latent within society-at-large; constructs and empirically tests new hypotheses about the link between these conflicts and the number of parties; and endogenizes elite-level conflicts. The empirical analysis, which employs an original time series cross-sectional data set, is primarily quantitative and cross-national although based around advanced industrial (and specifically Western European) democracies. Measurement and model specification issues that most empirical studies ignore are explored.

Striking variation in the fundamental conflicts within societies is identified, which suggests that common assumptions of one-dimensional political competition are untenable. While the dissertation concludes that the nature and number of these conflicts matter, it disagrees with existing studies about the ways in which they matter. It argues against the traditional approach of relating what are usually called social cleavages to the *number* of political parties. Instead, it suggests linking latent conflicts within society-at-large to the political agenda itself, the elite-level conflicts that divide political parties. Features of society such as ethnic heterogeneity are only weakly and non-linearly related to the number of competitors but strongly related to the types of issues that dominate the political agenda, which we might view as a more normative attribute of party systems.

Preface

Since business comes before pleasure, I will initially note that the contents of some chapters of this thesis were originally prepared for presentation elsewhere as detailed below.

- Chapter 3: Paper presented at the Annual Meeting of the American Political Science Association, Chicago, September 2–4 2004. Earlier version presented at the Graduate Student Retreat of the Society for Comparative Research, University of California–San Diego, La Jolla, CA, May 15–16 2004.
- Chapter 5: Portions of this chapter presented at the poster session of the Annual Summer Meeting of the Society for Political Methodology, Stanford University, Stanford, CA, July 29–31 2004.

But now on to pleasure. It is always difficult to decide who merits acknowledgment at times like these: so many people have contributed to this dissertation in so many ways that it would be an impossible task to recognize them all. Consequently, I open with an apology to those who are not mentioned here.

An easy place to begin the acknowledgments is with my committee, all of whom have my gratitude for putting up with numerous scheduling difficulties related to the defense. Administrative issues aside, an off-hand comment that Mo Fiorina made on my original prospectus was the genesis of the project: it launched the dissertation in a new direction that ultimately became its focus. This kind of profound and creative insight will surprise no one who knows Mo. I can only aspire to both his clarity of thinking and writing. To Beatriz Magaloni-Kerpel, what needs to be said about her unparalleled command of the literature and knack for seeing to the heart of the matter? For serving on the committee, several classes, directed readings, and frank conversations about careers in academia over the years, I owe her much.

Continuing on the academic front, thanks also go to Jonathan Wand for serving on the examination committee. He has prompted me to think carefully about fundamental issues of research design: to confront more honestly the truths about what regression analysis can and cannot do for us... truths that we in comparative politics have ignored for too long. Jonathan Bendor's gracious agreement to serve as the oral examination committee chair at the last minute and at some personal hardship made the whole thing possible, which I will not forget. His class on bounded rationality was one of the most important learning experiences I had at Stanford. It is reassuring to know that there are people like him working in political science, who impart rigor and clarity to all that they touch.

Last but not least is David Laitin. He has been a fabulous mentor over the years, steering me judiciously at critical moments but always doing so with a light hand. Where

his hand has been heaviest has been in always forcing me to think about the big picture: the "why should we care?" question that every graduate student (and every graduated academic) dreads. The benefits of the mindset that he has encouraged are innumerable. I don't think that I will ever sit down to write without asking myself the question and my work is certainly the richer for it. On a personal note, I have the deepest admiration for his breadth of knowledge. He is truly a renaissance academic and individual: there is very little in which he is not conversant, both within comparative politics and without. It has been a pleasure to be surrounded by his intellectual energy, and if even a smidgen of it has rubbed off on me, I will be content.

Stanford University has been a wonderful place to pursue a doctorate. The collegial atmosphere that pervades relationships among students and between students and faculty has diffused much of the tension from the doctoral enterprise save that which is inherent in it. Funding in the form of a Stanford University doctoral fellowship is gratefully acknowledged. Of my colleagues, special thanks go to Nahomi Ichino, Kenneth McElwain, David Patel, Jeremy Pope, Shawn Treier, Ebru Erdem, Eve Piscina (now d'Onfrio), and Jennifer Lawless (in no particular order) for both fun and helpful discussions about political science and, more generally, life. Nahomi, Jeremy, and Shawn created a productive office environment for two years. The department staff, particularly Jeanette Lee-Oderman and Eliana Vasquez, have been stalwart in always coming through for me when something needed to be done. Simon Jackman, Terry Moe, Anne Wren, Alberto Diaz-Cayeros, Jim Fearon, David Abernethy, and Isabela Mares have all at various points contributed to my development as a scholar.

Closing the book on academic acknowledgments, recognition must be given to Gary King and the Center for Basic Research in the Social Sciences at Harvard University, where I was a visiting research assistant during the year when the bulk of the dissertation was written, for their generous support. CBRSS is a place of remarkable intellectual vitality and I learned much during that year, particularly from Gary. He is another for whom I have deep admiration. He manages to juggle real concern for his students with an administrative and academic work load that would quail most of us, and he does it with a smile. I gained a broader perspective on what it means to do social science from him, as well as presentation skills that will be of use in perpetuity.

Finally, my family and friends have patiently put up with many excuses for the past few years. Hopefully the phrase that I "don't have the time" will if not disappear (too many horror stories of life as an assistant professor have been flung my way) then at least ameliorate in frequency. My husband has suffered the most. He has been deluged with numerous LaTeX questions, foregone treasured social activities to allow me time to work, and shouldered an unfair share of the household cooking. Without his love and support, this thesis would not now be filed (and I would be very hungry).

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Chapter 1

Introduction

Political outcomes are a function of both political institutions—the rules of the game that govern the process by which collective decisions are made—and the preferences of the citizenry. The statement that 'preferences × institutions → outcomes', attributable to Plott (1991), has sometimes been called the fundamental equation of politics (Hinich and Munger 1997). Such a statement may seem a truism today, but it took the new institutionalism, made prominent in political science by scholars such as North (1990), to refocus attention on the study of political institutions after the institutional drought of the behavioral revolution. Part of a methodologically individualist meta-research program, it explains macro-level phenomena by the strategic behavior of individuals. Institutions, either as enforcers of agreements that give rise to collective benefits or as "weapons of coercion and redistribution" (Moe 1990, 213), are "constraint[s] that human beings devise to shape human interaction" (North 1990, 4). As such, they structure the incentives that guide individual actions, which in turn underlie the aggregate outcomes—such as election results and legislative output—that we observe.

It is important to stress from the outset what is meant by the phrase 'the new institutionalism'. Here, it refers to the methodologically individualist meta-research program in the social sciences, which has spawned two substantive research programs: rational choice and bounded rationality. The new institutionalism of the former in political science has its roots in the new economics of organization and neo-classical economics more generally. It has largely adopted a collective benefits perspective on institutions (e.g., Shepsle and Weingast 1987, Weingast and Marshall 1988, Weingast 1997). However, a distributional perspective is not incompatible with it and has been advocated forcefully by Moe (1990, 1991) and Knight (1992), among others. The latter research program has its roots in the work of Simon (1957, 1981). It has unfortunately but understandably not made as much of an impact in political science.[1] What is not meant is work from a different meta-research program, one that explicitly rejects methodological individualism. The institutional school of organizational sociology, a substantive research program exemplified by the work of Meyer and Rowan (1977) and the garbage can theory of Cohen, March and Olsen (1972), has also spawned a 'new institutionalism' (March and Olsen 1984, DiMaggio and Powell 1991), but one that rejects agency for a world where "things are wild and crazy and weird" (Moe 1991, 117).[2] This thesis accepts as its premise that the goal of social science is to develop scien-

[1] See Bendor (2001) for a good overview of applications to political science.

[2] It is worth noting that Moe's comment was inspired by the garbage can theory. The 'weirdness' is the

tific theories that provide micro-foundations for macro-level phenomena. In other words, it places itself squarely within the methodological individualist research tradition and aligns itself with the former variant of the new institutionalism.[3]

In comparative politics, the new institutionalism has given impetus to research about political institutions, both large and small. A vast literature in the sub-discipline studies the variance in institutional arrangements across countries. Examples include regime types (democracy versus dictatorship as well as presidentialism versus parliamentarism); electoral systems; the horizontal and vertical structures of government (federalism vs. unitarism and uni- versus bi-cameral legislatures); central banks; and corporatism.[4] An overview, at an undergraduate level but nevertheless reflecting the breadth of the literature, is found in Lijphart (1999). It is true that the majority of attention has been paid to democratic institutions, as Laitin (2001) notes.[5] Nevertheless, the broad thrust of these studies is to ask how the constituent political institutions of polities, whether democratic or not, work. Their ultimate goal is to explain differential outcomes across polities. For example, differences in electoral systems are linked to different characteristics of political competition such as the number of parties contesting national elections. Studies such as these also ask why particular institutions are chosen as opposed to others. That is, they endogenize institutions, usually in the context of case studies of individual (or several related) polities. Returning to the electoral systems example just introduced, some have argued that the strength of new entrants is an important factor in the choice of a proportional versus a majoritarian system (e.g., Boix 1999). Further, many of these studies ground their explanations in the constraints institutions place upon individual behavior. Again turning to the electoral arena, different electoral systems are perceived as offering different incentives for strategic behavior (electoral coordination), which leads elites to launch different numbers of parties and for the masses to distribute their votes differentially over the launched parties. In focus and by the nature of the arguments employed, then, this literature has adopted the canons of the new institutionalism.

However, institutions do not—and cannot—tell the whole story: preferences have work

result of the computer simulation, not the original verbal theory (Moe, Bendor and Shotts 2001), but later work has built upon the former.

[3]Rejecting methodological individualism necessarily leads one to the view that "individuals are nothing more than bearers and transmitters of structural forces and therefore make no independent contribution to the explanation" (Taylor 1988, 77). This is a view at odds with the way in which most political scientists think about the world. Scholars such as Skocpol (1979, 1994) who reject 'voluntarist' and 'purposive' explanations turn history and politics into processes without subjects; individuals by this account become puppets of their circumstances.

[4]See Shugart and Carey (1992) on presidentialism and parliamentarism. Przeworski, Alvarez, Cheibub and Limongi (1996) and Przeworski and Limongi (1997) discuss an even broader classification of regimes: democracy and dictatorship. On electoral systems, the best exemplar is Cox (1997), one of the most influential recent texts in comparative politics. Tsebelis and Money (1997) address the structure of legislatures while Tsebelis (1995) offers a more general argument about both partisan and institutional veto players. Central banks are addressed by Alesina and Summers (1993), Hall and Franzese (1998), and Iversen (1998), among many others. Classic texts exploring variance in corporatist structures are Cameron (1984), Lange and Garrett (1985), and Calmfors and Driffill (1988).

[5]In a sense, the field of comparative politics that is described here is a compilation of Laitin's 'Political Institutions' and 'Comparative Politics' sub-fields. Like his 'Political Institutions' sub-field, it is concerned with how institutions work; like his 'Comparative Politics' sub-field, it is concerned with outcomes that vary across countries and the exogenous factors that account for such variance. For a discussion, see Laitin (2001). Laitin (1998, 2000) offer earlier versions of the argument.

to do as well. Conventional understandings of the world go hand-in-glove with very old and fundamental philosophical debates to tell us this. One need only compare the writings of the ancient Greek philosophers with the early scholars of the Christian tradition to understand how different ideas about political life can be. For Aristotle, for example, politics exists to facilitate human flourishing: it is the crucible where man, a political animal, realizes his particular excellence on earth (*areté*).[6] For Paul, on the other hand, politics exists as a terror to evil works, to control the wicked and minister to the good until the day of salvation, near at hand, finally dawns.[7] A thought experiment can easily conjure up two imaginary states, Aristotelia and Paulia, each dominated by the respective perspective on politics. While one might argue that each state is naturally inclined towards a certain set of political institutions, accepting for the sake of the thought experiment that the same set exists in each, the mind boggles at the many ways in which political life would differ between the two states. Dissimilarities would likely include the issues that the citizens debate and the activities of the governments. We might imagine that education would be a major focus of the Aristotelian state whereas the Paulian state would put its energies into law enforcement (notably of the 'Thou Shalt Not Kill' sort of commandments). Further, if Aristotelians and Paulians woke up one morning to find themselves coexisting in a single state, the political sparks would surely fly.

While the prior paragraph has deliberately drawn an exaggerated contrast between two sets of beliefs and the likely consequences each would have for political life, the lesson has hardly been lost upon modern political scientists. While some new institutionalists controversially claim that "generally speaking, the institutions of politics provide a larger part of the explanation than do preferences" (Dowding and King 1995, 7),[8] much of the new institutionalism still leaves a role for preferences to play. It goes without saying (but shall be said here anyways) that we should disregard Dowding and King and acknowledge that the only interesting political stories to contemporary political scientists are the ones characterized by disagreement.[9] Social choice theory provides a vivid illustration: the rationality or irrationality of group preferences (i.e., the presence or absence of voting cycles) is jointly determined by the structure of and the method of aggregating individual preferences. Similarly, game theory formalizes institutions and their effects on interdependent individual

[6]For an elaboration of these ideas, consult Aristotle's *Nicomachean Ethics* and *Politics*. Plato, of course, also viewed the ultimate goal of politics as the development of human excellence; however, he viewed politics itself as a necessary evil, not constitutive of human nature. In fact, he consigned it to the realm of experts (his philosopher kings).

[7]These ideas are developed most forcefully in Romans 13; similar themes pervade the writings of other early Christian philosophers such as St. Augustin.

[8]Dowding and King (1995) offer in support of their contention work by scholars such as Hall (1986), who they argue explains different policy outcomes in France and Britain not by differences in interests, which do not exist, but by differences in institutions. This may be somewhat of an overstatement of Hall's position regarding the role played by interests, ideas, and ideology in economic policy-making, but there is some merit to Dowding and King's characterization.

[9]Hinich and Munger (1997, 6–7) playfully describe the collective choice that the hypothetical Hun-Gat tribe must make about where to find food: to stay put; to go north; or to go south. The inherent boredom political scientists feel when confronted with unanimity emerges clearly from their writing: "If everyone wants to go north or south, they all go. If all want to stay, they stay." Conversely, their excitement is barely disguised when different Hun-Gats want different things: "Disagreement tests collective choice mechanisms; conflict strains the ties that gather a group of individuals into a society." In fact, the rest of their introductory text—like the spatial theory it explicates—is devoted to analyzing what the Hun-Gats should do in this circumstance.

decisions, where one critical structure of a game is individual preferences over outcomes. Hence, comparative politics as a sub-field must not only concern itself with variance in institutions when explaining variance in outcomes. It must shake off the new institutionalist nay-sayers and also concern itself with variance in preferences.

This is precisely the goal of this thesis. It asks how preferences vary across polities and time; it assesses the consequences of this variance for outcomes such as the number of parties competing in equilibrium; and endogenizes one type of preferences by exploring the sources of variation in the political agenda.

1.1 Preferences Matter, Too

Broadly speaking, preferences are viewed by this thesis as the societal inputs into the political process. They include both the set of fundamental dimensions that structure political life and actors' rankings of the alternatives over each dimension. To return to the initial, hypothetical example, one dimension might be 'the development of human excellence' and another 'the enforcement of laws and punishment of the wicked'. Alternatives over the latter might include 'maximal enforcement but minimal punishment' and 'maximal enforcement and maximal punishment'. One could in modern, spatial terminology boil this down to the distribution of the multi-dimensional ideal points of the actors in question. Comparative political scientists have often used the term 'social cleavages' to capture this notion of preferences at the aggregate, or macro, level. The thesis initially follows this convention without prejudice to any specific meaning of the term, which, as will shortly become clear, has varied greatly. Other terms used include 'issues'; 'issue space'; 'ideology'; 'preferences'; 'social heterogeneity or homogeneity'; 'issue dimensions'; and 'political cleavages'.

To expand upon the motivation for this line of inquiry, while it cannot be said that preferences have dropped off of the agenda in comparative politics, the pendulum has now swung too far in the other direction towards institutions. This is particularly true for cross-national (large N) empirical research. Qualitative cross-national empirical research, which usually involves a small number of cases, and individual case studies more often pay roughly equal attention to both preferences and institutions. Even here, though, the theories that integrate and the empirical measures of preferences are underdeveloped relative to those of institutions. For example, despite recent efforts to incorporate both variables in the electoral and party systems literature, institutional variables still predominate. Theorists have not been able to agree on how preferences should relate to party systems. Empiricists, possessing either too few or infinitely many testable hypotheses (depending on one's perspective), have valiantly tried but failed to coherently integrate preferences into empirical models.

The first goal of the thesis is to identify important cross-national differences in preferences. When we think of how countries differ politically, part of what we immediately think of is differences in the rules of the game—i.e., in institutions—but surely another part is in the terms of the debate—i.e., in preferences. An interesting question in its own right concerns the variance in preferences across countries. What do people want? In Lasswell's (1936) famous maxim, politics is about 'who gets what, when, and how'; in Lenin's, it is about '*kto kogo*', or who can do what to whom. Do people want to 'get' fundamentally different things from their political processes across time and space? Do they want to 'do' different things to others? Aristotelians and Paulians certainly do; it seems hard to believe that the inhabitants of the real world do not also have differences, if less stark, in their

predilections. Answering these questions requires comparativists to determine which conflicts characterize each country. Of interest are their number and the nature; together with the distribution of individuals over the positions that can be taken on the conflicts, these may be said to characterize the preferences of a polity's citizens.

Interest in the nature of conflicts has a long pedigree. Certain conflicts have historically been considered to be of special import by political philosophers and comparativists. Marx, for example, put class conflict on the map. The supposed inevitability of this specter's march across Europe and its consequences for the bourgeois elite has made tracking its spread a vital practical and academic matter for the past one hundred years. Similarly, ethnic conflict has more recently been viewed by some academics as unusually virulent relative to other conflicts (e.g., Horowitz 1985). For scholars interested in particular conflicts such as these, identifying where the conflicts can be found is the first step to either exploring their origin or linking them to various consequences.

More generally, area specialists in comparative politics have explored variance in the substance of politics as part of their calling. While much light has been made of the unrealistic degree of difference between the hypothetical Aristotelians and Paulians, some area specialists have challenged the comparative method on similar grounds. For example, Geertz (1980) has argued that politics in Negara (19th century Indonesia) is incommensurate with politics in the West: the latter revolves around power and the former pomp. Today, with many comparativists accepting commensurability while recognizing differences, the observation that citizens of two countries want different things is a building block of commonplace notions that countries do differ from one another. Witness, for example, journalistic comments that politics in Belgium centers on language (ethnicity) and in Germany on redistribution, welfare, and economic development (class).[10] In more academic circles, it is common to find country specialists beginning texts about the politics of a particular country with a discussion of its major political fault lines. For example, a recent political history of Belgium takes as its point of departure the "well known" fact that "recent Belgian political history is dominated by three intertwining problems—the socio-economic, the religious-philosophical and the language dispute" (Witte, Craeybeckx and Meynen 2000, 13). With respect to cross-time variance in a single country, historians and political scientists have studied the far-reaching consequences of change in the substance of debate. A famous example is the Algerian crisis in 1950s France, which brought down the Fourth Republic (Williams 1964).

Comparativists have often been interested in a related and more specific quality. Countries characterized by only one conflict might be said to be less diverse—more homogeneous—than those that have several conflicts and subsequently be judged more democratically stable. Alternatively, one might argue—as many such as Lipset (1960) have—that cross-cutting cleavages, i.e. multiple orthogonal or near-orthogonal lines of conflict, lead to a more stable political process than either a single line or several overlapping (reinforcing) lines of conflict. Comparing preference diversity, the number of distinct conflicts in a country, across countries has thus been a recurrent concern in comparative politics, one that has spawned numerous hypotheses linking it to various facets of politics. Beyond intrinsic interest in the

[10]Compare, for example, the U.S. State Department's Background Notes on the two countries. A significant proportion of the Note on Belgium deals with the linguistic divide, whereas the Note on Germany mostly addresses economic issues, many of which recently stem from re-unification. Other sources such as the MSN Encarta Online Encyclopedia (`http://encarta.msn.com`) reveal similar differences in emphasis.

terms of political debate, then, characterizing and comparing preferences and preference diversity across countries is an important task because it helps to explain cross-national differences in the nature and outcomes of the political process.

A prominent example is the relationship of preferences to party systems, a social scientific theory of which is the second goal of the thesis. In the most general terms, students of electoral and party systems argue that the more preference diversity in a country, the more political parties a country will support. The focus, in other words, is on linking features of society to the number of electoral competitors, one definition of the abstract concept of 'party system'. More nuanced arguments incorporate the effect of electoral systems on this relationship. To name one in a long line of studies,[11] Cox's (1997) influential book argues that strong electoral systems place a constraining upper bound on the equilibrium number of candidates or party labels competing in an election. However, the upper bound only 'bites' if the number of parties supported by a country's social cleavages (its 'natural' number of parties) exceeds the equilibrium carrying capacity. In this case, downward pressure is applied on the number of competitors by the strategic behavior of voters and elites. In other words, a country's party system is an interactive function of its social cleavages and political institutions such as its electoral system. The party system, in turn, is central to understanding many feature of a country's political life. These features include the distribution of government types;[12] government stability;[13] policy stability;[14] the magnitude of policy swings;[15] government accountability;[16] macro-economic policy outcomes;[17] and the overall flavor of the democratic process.[18]

It is worth pausing for a moment to reflect upon the normative reasons for pursuing a link between preferences and the number of parties. Is there a more fundamental rationale for

[11]In comparative politics, studies developing or testing general theory include Duverger (1963), Lipset and Rokkan (1967), Rae (1967), Sartori (1976), Grofman and Lijphart (1986), Taagepera and Shugart (1989), Lijphart (1990*a*), Lijphart (1994), Ordeshook and Shvetsova (1994), Sartori (1997), and Cox (1997), amongst many, many others. There are also numerous case studies that address these issues, such as Meisel (1974) and Reed (1990), also amongst many others.

[12]In parliamentary regimes, minority and coalition governments are more common in fragmented party systems; single party majority governments are more likely less fragmented ones (Blais and Carty 1987, Wolendorp, Keman and Budge 1993).

[13]Empirical studies have consistently shown that single party governments last longer than coalition governments (Wolendorp, Keman and Budge 1993). Even controlling for government type, the stability of governments still varies with the party system in that fragmented or ideologically polarized party systems lead to a situation of bargaining complexity. Small changes ('shocks') in such political environments destabilize existing equilibria and bring down governments (King, Alt, Burns and Laver 1990, Warwick 1994, Lupia and Strom 1995, Diermeier and Stevenson 1999).

[14]The parties in a polity of any regime type can be viewed as partisan veto players. Assuming a certain degree of policy incongruence between them, as the number of parties increases, so too does policy stability (Tsebelis 1995).

[15]Despite Downs's (1957) prediction that party competition will lead to policy convergence on the median voter in two party but not in multi-party systems, two party systems are associated with larger policy swings from government to government. For example, partisan politico-economic cycles are larger in two than in multi-party systems (Alesina, Roubini and Cohen 1997).

[16]Studies comparing campaign pledge fulfillment across polities have found that an increase in party system fragmentation will tend to produce a decrease in pledge fulfillment rates (Thomson 1999).

[17]For example, multi-party systems, by typically delivering coalition or divided government, have slower response times to fiscal shocks and are associated with higher budget deficits (Alesina and Perotti 1994, Alt and Lowry 1994).

[18]Some political processes are best characterized as majoritarian and others as consensual or proportional, to name one well-known distinction (Grofman and Lijphart 1986, Katz 1997, Lijphart 1999, Powell 2000).

the inquiry than the impact that the number of parties has on politico-economic cycles? The answer is most assuredly yes. One normative principle for assessing the quality of democratic representation is how closely public policy resembles that preferred by the median voter (or citizen, depending on one's perspective).[19] Huber and Powell (1994) and Powell (2000) distinguish between the convergence of political parties on the median voter on the one hand and the convergence of the government and, ultimately, public policy on the median voter on the other. Their argument, found also in Cox (1997), is that if electoral coordination is successful under restrictive electoral systems, yielding a two party system, then parties, governments, and policy will be close to the median voter. However, empirical evidence shows that coordination failures under restrictive electoral systems are endemic. As a result, governments and policy (if not parties) are usually closer to the median voter under less restrictive electoral and multi-party systems than under restrictive electoral and two party systems. The party system, defined as the number of competitors, is thus perceived to relate to the quality of democracy, an obviously fundamental normative issue. Advocates of 'consensual' or 'proportional' democratic processes also study the number of competitors with normative issues of democratic representation in mind. Some of these scholars may implicitly have the median voter criterion in mind but explicitly a less rigorous argument that larger numbers of political parties facilitate the normative goal of representation (e.g., Lijphart 1999) is usually offered. However, the link from the number of competitors to the normative issue is often not clearly made in such studies.

But is this where our normative evaluation of liberal democracy should end? This time around, the answer is most assuredly no. The median voter arguments outlined above as well as the empirical evidence marshaled to assess them are based on the assumption that political competition is one dimensional, with both parties and voters arrayed along a left–right continuum. The focus is on the positions of parties, governments, and policy relative to voters, conditional upon an agreed-upon set of issues that structure political debate. The problem is as follows. By presuming that voters and parties see eye to eye about which issues should define political competition, the traditional approach does not dig deeply enough. Democratic theory tells us that the types of issues that people care about should feature on the political agenda. But to what extent does this actually happen? Might not the more fundamental struggle be over the political agenda itself? We need only look back to heyday of power studies or to formal theory to realize the importance of agenda control. For example, Bachrach and Baratz (1962) influentially argued that the limitation of decision-making to relatively non-controversial matters or to those matters favorable to a particular group is an important 'second face' of power.[20] The normative focus on the congruence between the median voter and public policy and the conventional theoretical and empirical focus on the number of parties in comparative politics unfortunately tend to obscure this bigger picture.

Third and finally, this thesis cuts to the chase and directly investigates the key issue. Is democratic theory working as we expect it to? Do political parties everywhere conspire to keep certain types of issues off of the agenda or are they everywhere responsive to the concerns of citizens? Even democratic theory, from some perspectives, does not expect the

[19]Other scholars such as Adams, Clark, Ezrow and Glasgow (2004) assess party responsiveness to public opinion and to past election results without explicit reference to the median voter.

[20]On this note, Robert Dahl laments that political science (by implication, comparative politics) has not only failed to progress in the study of power but has actually gone into reverse (Munck and Snyder 2004).

latter. Consociational democracy is ideal for highly plural societies, so the argument goes, precisely because it bars certain types of issues from the debate. The first task is to decide if the one-dimensional left–right continuum that is commonly assumed to structure political competition is in fact a good description of how both parties and citizens see the world. Armed with this information, the second task is to explore another interesting source of variation: where and why the conflicts dominating the political agenda diverge from those dominating citizens' everyday lives. We can push the issue even further and additionally ask why citizens care about the types of issues they do. This question is approached with trepidation, though, given its thorny, long-intractable nature. In other words, the thesis's final topic endogenizes the political agenda while shedding some light on—but not actually endogenizing—the conflicts amongst the citizenry. It asks which factors explain why of the "billions of potential [latent] conflicts in modern society... only a few become significant" (Schattschneider 1960, 64).

In all these respects, the thesis follows the canon of the new institutionalism: identifying variance in an abstract concept; linking variance in the concept to variance in outcomes; and endogenizing the concept. Of course, it is distinguished from the new institutionalism by applying this canon to the abstract concept of preferences instead of institutions. Another notable difference is that in endogenizing the political agenda, it takes steps towards accounting for variance in arguably one of the most important outcomes of them all.

1.2 Relationship to Other Literatures

Two literatures have addressed similar, although not identical, questions to the ones posed here: the spatial theory and voting behavior literatures. This section reviews these literatures and their relationship to this thesis.

1.2.1 Spatial Theory

Downs (1957) popularized spatial models of politics, which were initially—like so many modern political science tools—developed by economists. His simple and intuitively plausible model placed parties along an essentially left–right policy continuum. Based on assumptions about the voter distribution over this continuum; how voters vote; what politicians want; and the number of candidates, among others, Downs famously argued that parties will converge on the policy position of the median voter. Subsequent work has varied many of Downs's original assumptions to make predictions about the equilibrium number and positions of competitors. More fundamentally, spatial models investigate whether or not equilibrium exists at all: in the multi-dimensional case, absent certain institutional structures, spatial theorists have argued that it is quite unlikely (Plott 1967, McKelvey 1976, Shepsle 1979, Shepsle and Weingast 1981).

Two key ways in which this thesis diverges from spatial theory are noted here. First, spatial models of political competition usually take the issue space and the voter distribution over the issue space as given.[21] Some work has relaxed the latter assumption in the sense that the voter distribution is varied and results from the corresponding models are compared; however, the voter distribution remains exogenous to competition itself. Conversely, most work does not relax the former assumption: models almost invariably rely upon an

[21] See Shepsle and Cohen (1990) for a review of the literature with respect to these issues.

exogenous, unidimensional issue space. This thesis, in contrast, attempts to endogenize the voter distribution and does endogenize the issue space. It also seeks to empirically identify and explore some consequences of multidimensionality. The difference here is primarily one of emphasis. It is not that spatial theorists have not addressed the concerns of this thesis; rather, they have not given them primacy for very understandable reasons, e.g. their intractability when approached via formal modeling.

Second, the classical spatial model that developed from Downs's work situates choices in an n-dimensional policy or issue space. Each dimension corresponds to a concrete issue of the sort on which legislative committees vote, e.g. overcrowding in prisons, to borrow an example used by Hinich and Munger (1997).[22] In many ways, this diverges from Downs's original formulation. One of his major contributions was to recognize the information costs and uncertainty that voters face, which render the classical spatial model an unrealistic theory of mass politics.[23] He instead placed competition in an ideological, not a policy or an issue, space. By this account, ideology links issues together in systematic ways, conserving on voters' information costs and resulting in a space that is lower dimensional (simpler) than the complex issue-defined space. For Downs, as mentioned, this ideology was the proportion of economic activity left to the private sector, which structured the positions people took on a myriad of political issues from health care provision to the level of taxation.

This thesis adopts a Downsian perspective: the dimensions, cleavages, or conflicts with which it is concerned and that structure the space of political competition are ideological. That is, they provide links across substantive policy issues; are latent in the sense that they are determined by the way issues cluster in voters' and political elites' minds; and may differ from individual to individual and across time. It must be noted that they include a normative component. By the very nature of clustering, the issues that cluster together in relation to an ideology all address a particular end goal of society. Downs (1957, 96) called this a "verbal image of the good society". In Downs's case, this was the regulation of economic activity; for the hypothetical Paulians, the end goal looks quite different: keeping people from violating God's commandments and punishing them when they do. However, many individuals may not be conscious of this normative component. Further, as recognized by later spatial theorists who have taken the theory of ideology seriously, the correspondence between ideology and issues need not be causal (Hinich and Munger 1997); all that is required is that a set of associations be shared by a large group of individuals in the political community.

Implicitly, this is the position that many empiricists in comparative politics have adopted, as will become clear in Chapter 2. Confronted with the real world, it quickly becomes impossible to manage an issue-based space, which underscores Downs's very pertinent recourse to a simpler, ideological structure. This also corresponds to the way in which comparativists have theoretically approached what this thesis has called variance in preferences. While the issues that are debated in different polities are certainly relevant to particular research questions, the Holy Grail at the highest level of aggregation is the underlying source of

[22] In Newton's words, we stand on the shoulders of giants. Here, the giants from whom this and the following paragraph draw inspiration are Hinich and Munger, who pioneered the application of spatial theory to ideology.

[23] Downs (1993, 9) himself describes this as his most important contribution, even though the spatial analysis of parties has become more famous.

observed differences in issues. This source is nothing other than the dominant ideology or ideologies, the fundamental conflicts that structure political competition. In sum, while the thesis does not seek to employ formal spatial modeling techniques and diverges in several important respects from the classical spatial model, it nevertheless owes a great deal to this literature.

1.2.2 Political Behavior

The term 'social cleavages' was originally formulated in the 1950s as part of the behavioral revolution. A large micro-level literature emerged to explore the determinants of individuals' political behavior, a dependent variable usually operationalized as voting behavior. Social cleavages, defined as ascriptive or objective sociological traits that divide individuals into groups, are perceived as one such determinant.

Berelson, Lazarsfeld and McPhee (1954) put social cleavages on the map by concluding that voting choices are explained by sociological factors such as race, religion, class, and familial pressures. Campbell, Converse, Miller and Stokes (1960) argued against this purely sociological model in favor of the 'funnel of causality', which envisions voting choices at one end of a funnel and causal factors increasingly removed from the dependent variable further up the funnel. Psychological factors such as party identification are found at the political behavior end and sociological factors at the other. Hence, they advocate explaining voting choices by either sociological or psychological factors, depending on the type of explanation desired.[24] In the sub-field of comparative politics, scholars have conducted cross-national surveys and case studies of particular countries (e.g., surveys of individuals in the United Kingdom) along similar lines. For example, Lijphart (1971*a*, 1979), Rose (1974), and Heath, Jowell and Curtice (1985) work from the sociological end of the funnel of causality to determine the relative influence of various sociological factors on vote choice. Conversely, Budge and Farlie (1976), Chhibber and Torcal (1997), Bartle (1998), and Torcal and Mainwaring (2003) explore how psychological attributes mediate the impact of these factors.[25]

The concerns of this thesis diverge from the voting behavior literature in several ways. The first of these is in objective. The voting behavior literature seeks to identify the coalitions of voters that support particular parties or the factors that predict an individual voter's support for one particular party or candidate. This thesis is not interested in either

[24]The insights of Campbell et al. have been developed by scholars such as Miller and Shanks (1982, 1996) and Shanks and Miller (1990, 1991) into what Sniderman, Griffin and Glaser (1990, 121) describe as a "consensual approach" to the study of voting. Characteristic of this approach is a causal chain of variables arranged in temporal order, with personal characteristics at the beginning of the chain; intervening variables such as ideological disposition, party identification, performance evaluation, and feelings about candidate along the chain; and vote choice at its end. However, Stimson (1975), Sniderman, Griffin and Glaser (1990) and Sniderman, Brody and Tetlock (1991) voice an important theoretical objection to this approach: all voters are not alike; cognitive abilities and political information affect which variables appear and their ordering on the causal chain. Rivers (1991) and Achen (1992) echo similar theoretical concerns and point to their methodological consequences.

[25]Early comparative politics studies of voting behavior concluded that socioeconomic status and religion are the prime determinants of vote choice (e.g., Converse (1974) and Lijphart (1979)). Later studies demonstrated that these variables, while important, are often mediated by psychological variables such as left–right ideological orientation (e.g., Bartle 1998) or party identification (e.g., Budge and Farlie 1976). Note, however, concerns raised about the inseparability of party identification and vote choice raised by Budge and Farlie (1976).

of these research questions. Specifically, it resists defining divisions between voters solely in terms of the existing set of political parties, as the voting behavior literature is wont to do. While voter choices are effectively limited to the set of launched parties when election day rolls around, in preceding months, parties strategically decide whether or not to enter competition and how to position themselves in the ideological space, which may include altering it. The set of parties competing, the positions of parties in the ideological space, and the ideological space itself are all dynamic, not static, variables. Spatial models make these points quite clearly. In other words, by defining conflicts amongst voters solely in terms of existing parties, very relevant information such as the ideological dimensions structuring voters' political views is missed. New conflicts may emerge among voters that cannot be easily accommodated within the existing ideological space of party competition; these new conflicts are ripe for exploitation by strategic parties seeking to upset the game of politics-as-usual. That is, in order to do justice to the notion of political parties as strategic actors and to account for change over time, we must allow voters' ideological spaces to differ from the ideological space defined by political parties themselves.

Second, a substantial portion of this literature remains wedded to explaining vote choice or defining cleavages amongst voters using sociological traits such as gender or race. For example, with respect to the latter, Manza and Brooks (1999) point to consistent African-American support for the Democratic Party as evidence for a racial cleavage in the United States. As this thesis will later argue at length, sociological traits cannot generally be a part of causal explanation. Achen (1992, 198) elaborates on this point in his critique of voting behavior studies:

> "When researchers are being theoretically serious, demographics should be discarded. They belong neither in party ID nor in vote equations. The voter's political history is the only causal variable. Age, social class, and other background factors will be correlated with history, of course; they may provide a serviceable summary for purely descriptive purposes. But they do not belong in explanatory equations."

Nevertheless, the voting behavior literature's reluctance to recognize the problematic causal status of such variables sets it at odds with the approach adopted here.

Finally, there is a tendency to make inferences about the ideological space of political competition on the basis of cleavages identified between party supporters, e.g. the Manza and Brooks argument mentioned above. This is problematic for many reasons. As Lijphart (1990*b*, 253) argues,

> "Ideologies and programmes must be distinguished from the characteristics of the voters that parties represent. For instance, the fact that a party receives unusually strong support from Roman Catholic voters does not automatically make it a Catholic party and does not necessarily indicate that religion is an important dimension in the party system."

Again, this thesis breaks with the voting behavior literature in this respect. Identifying the ideological space in which parties compete based on party supporters' sociological traits assigns meaning to something that cannot, without further empirical work, be viewed as more than a correlation. This thesis sides with the many comparativists who argue that the ideological dimensions structuring party competition (the party system in Lijphart's terminology) can only be identified by examining what parties themselves—their leaders, their manifestos, their candidates—have to say. Thus, in spite of numerous similarities in

the questions asked and terminology used by this thesis and the voting behavior literature, the former diverges quite sharply from the latter.

1.3 Organization of the Thesis

Part I of the thesis will review and evaluate existing theoretical and empirical work. Chapter 2 begins addressing the first focus of the thesis: how do preferences vary across countries? To do so, it initially reviews the debate about how preferences should be defined and lays the definitional groundwork for the rest of the thesis. The most important definitional parameter identified distinguishes between latent conflicts; conflicts that are politicized (salient within the citizenry); and conflicts that are particized (picked up by political parties and put on the political agenda). It then explores the existing operationalizations of these three preferences variables. Finally, it evaluates the validity and reliability of the existing measures, some of which lack reliability and hence validity and others of which lack face validity.

Chapter 3 reviews and evaluates the existing literature relating preferences to party systems, the second focus of the thesis. It begins with identifying the most common definition of the dependent variable: the party system as the number of competitors. How well aspects of the different definitions of both the preference and party system variables further the research goals of the literature will be one subject of this chapter, as will the methodological consequences of the disjuncture between empirical operationalizations and theoretical definitions. This chapter also addresses the methodological consequences of improperly specified relationships between variables, as the theoretical literature—however underdeveloped—provides some guidance about testable hypotheses that empirical researchers have not always heeded. Finally, it assesses the robustness of empirical results to different operationalizations of both the independent preferences and dependent party system variables. Chapter 3 will conclude by applauding the attempted integration of institutions and preferences in explanations for cross-national variance in the number of political parties; however, it will leave the conclusions drawn on the basis of the empirical literature imperiled.

Part II of the thesis seeks theoretical and empirical solutions to the problems identified in Part I. Chapter 4 proposes its own operationalizations of the latent and particized preferences variables, providing empirical data on an important source of cross-national variation. The data makes clear that while the one-dimensional left–right continuum is a good description of political competition in some countries and time periods, it is inadequate in others. The political agenda is not infrequently dominated by two or more conflicts of roughly equal salience. Similarly, there is often more than one latent conflict in countries.

Chapter 5 builds upon existing research both theoretically and empirically with respect to the relationship between preferences and party systems defined as the number of competitors. It refines the theory reviewed in Chapter 3 and uses the new measures of preferences developed in Chapter 4 to test the resulting hypotheses on new time series cross-sectional datasets. The surprising null finding is that while the data weakly supports the hypothesized non-linear relationship between latent preference diversity and party system fractionalization, the relationship is not statistically significant at conventional levels. Further, the hypothesized conditional relationship between electoral system restrictiveness, latent preference diversity, and party system fractionalization is not supported by the data. An even weaker non-linear relationship exists between particized preference diversity and

party system fractionalization. However, the more complex models suggested by the thesis do outperform their simpler, linear competitors. On the methodological front, this chapter argues that comparativists should sometimes move beyond the Beck and Katz (1995) prescriptions for dealing with time series cross-sectional data. Greater attention to model specification is often called for.

Finally, Part III of the thesis turns to what was earlier described as the big picture. The chapter argues for a new research agenda in comparative politics in light of the disappointing findings of Chapter 5. Instead of focusing on the number of electoral competitors, it advocates a focus on the terms of the political debate, which might be viewed as another definition of party systems. Accordingly, chapter 6 seeks to endogenize preferences. The primary goal is to account for cross-national variance in the political agenda. To do so, it synthesizes existing theories of the relationship between latent, politicized, and particized preferences. Strategic behavior by political entrepreneurs is identified as the micro-level force driving the politicization and particization of cleavages. At the macro-level, the driving forces are political institutions such as electoral systems. The chapter takes up two empirical issues deriving from the theoretical hypotheses developed. First, it assesses the impact of electoral systems upon the dimensionality of the particized ideological space. Second, it explores the empirical relationship between latent and particized preferences. Latent cleavage salience, e.g. features of society such as ethnic polarization, is generally found to strongly and positively relate to particized cleavage salience, e.g. the extent to which ethnic issues dominate the political agenda. Society does shape the political agenda, as democratic theory suggests it should, but the relationship is far from deterministic, as hypotheses about political entrepreneurs predict. However, puzzling empirical anomalies remain. Chapter 7 concludes.

The appendix contains information about the data employed by the thesis. This includes descriptions of the variables and cases as well as sources for both original and secondary data sets.

Part I

Reviewing Existing Scholarship

Chapter 2

Conceptual and Measurement Issues

Despite a generally accepted sense that preferences matter, the variable of 'social cleavages' or 'preferences' has been conceptualized in a myriad of ways in comparative politics. For example, the Manifesto Research Group investigates the policy space underpinning political competition (Budge, Robertson and Hearl 1987, Budge, Klingemann, Volkens, Bara and Tanenbaum 2001); Inglehart (1984) explores the ideological dimensions structuring mass opinion; and Cox (1997) studies the heterogeneity of social structures. The origin of these different perspectives lies at least partly in the different literatures—spatial theory and political behavior—from which macro-level comparative scholars have borrowed. The commonly used term 'social cleavages' has contributed to the conceptual confusion. Some have used it with the aim of focusing attention on society's input into the political process, which they want to distinguish from the institutions that govern the process. This perspective has roots in spatial theory and in formal theory more generally. Others have used it to mean large-scale sociological divisions between individuals, a perspective with roots in political behavior. The former is the topic with which this thesis is broadly concerned. The latter, as will shortly become clear, is one particularly narrow definition of the abstract concept of interest.

Different perspectives are reflected in the terminology employed; in the empirical measures of the concept that are developed; and in the theories into which the variable is incorporated. Nevertheless, all such studies assume that "the particular manner in which members of a society divide from and associate with one another in regard to political issues has major, direct, and specifiable consequences for political conflict" (Zuckerman 1975, 232).[1] What these consequences are is the topic of later chapters. This chapter reviews the way scholars have thought about and tried to measure conflicts within societies.

The first section of this chapter identifies the fundamental definitional issues that inform the debate. It also weighs in on the debate, establishing the definitional position that the remainder of the thesis will take. The second section surveys existing operationalizations. The third and final section evaluates both the validity and reliability of these existing operationalizations.

[1] A debt to Zuckerman (1975) is acknowledged here: although dated, his article provides interested scholars with an excellent overview of past thinking about cleavages and their relationship to political conflict.

2.1 Defining Preferences

G. K. Chesterton pithily wrote in *As I was Saying* (1936), "A man does not know what he is saying until he knows what he is not saying". An essential part of a social science that seeks to "make descriptive and causal inferences about the world" (King, Keohane and Verba 1994, 7) is the testing of hypotheses that posit relationships between abstract concepts. This requires scholars to define concepts in a way that allows them (or their implications) to be observed and measured, what some have described as "maximizing concreteness" (King, Keohane and Verba 1994, 109). The greater the gaps between an abstract concept, definition, and operationalization, the less certain is the ultimate status of a theory. Such an approach to social science views concepts as neither right nor wrong but as more or less useful, where utility is determined by balancing theoretical importance and empirical precision (Zuckerman 1975). In other words, definitions must clearly convey what the concept of interest is and what it is not. Chesterton would no doubt consider this simple common sense, yet too often definitional matters do not receive the attention that they deserve.

2.1.1 Definitional Issues

Three definitional issues underpin different perspectives on the abstract concept of interest, preferences or social cleavages. These issues comprise distinct conceptual dimensions of any definition. First, should preferences be solely viewed as of sociological origin? On one hand, the earliest view is of an inherently sociological phenomenon—of divisions between groups rooted in objective, ascriptive traits. On the other hand, a more recent view is of a non-sociological phenomenon—of divisions between groups that are not necessarily rooted in objective traits. Divisions may, for example, relate to the opinions that people develop about issues such as foreign policy. Second, should preferences be viewed as persistent across time? One view is of a fundamentally long-term (stable across many elections) phenomenon; another is of a short-term (potentially specific to one election) phenomenon. Third, should preferences be viewed as latent, politicized within the electorate, or underpinning divisions between political parties? The first two issues, which tend to 'hang together', are dealt with simultaneously and are followed by a discussion of the third issue.

The most influential piece of scholarship on what has historically been called social cleavages in the comparative politics literature laid the theoretical groundwork for a long-term, sociological definition. Lipset and Rokkan (1967, 6) defined social cleavages as the "conflicts and controversies [that] can arise out of... relationships in the social structure..." between groups in a political community. They identified four historically important cleavages arising out of the national and industrial revolutions: the urban–rural, worker–employer, center–periphery, and church–state. This perspective remains widely accepted today. Social cleavages are commonly defined as conflicts among large segments of the population rooted in sociological divisions, to be distinguished from similarly-scaled conflicts rooted in other (non-sociological) divisions. The attributes that comprise sociological divisions are difficult for individuals to change, such as race. Some have called such traits 'sticky' (van der Veen and Laitin 2004) and others 'ethnic' (Chandra and Boulet 2003).[2] Constructivist scholars

[2]Chandra and Boulet (2003), for example, place the types of attributes, the values of which comprise identity categories (or social groups), on a scale according to the difficulty of changing them. Physical features

assume that individuals will favor sticky or ethnic attributes over non-sticky or -ethnic ones in choosing the social group to which they will belong. Further, divisions underpinned by such attributes are viewed as likely to persist over a long period, although constructivists in particular are careful to argue that stickiness does not guarantee persistence. The perceived preference for groups defined by sociological attributes combined with the persistence of the resulting divisions are taken by many to justify a focus on sociological divisions. This long-term, sociological perspective is the theoretical well-spring for those who empirically model social cleavages as objective features of society such as Cox (1997). It is not surprisingly closely identified with early voting behavior studies, e.g. Rose (1974).

Others diverge from a purely sociological perspective. Dahl (1966) defined cleavages as the long-standing conflicts around issues that characterized a political system. Eckstein (1966) differentiated between 'segmental cleavages', political divisions that closely follow lines of objective social differentiation; 'cultural divergence', divisions resulting from different interpretations of the world; and 'specific disagreements', divisions over policy. While Rae and Taylor (1970) defined cleavages similarly to Lipset and Rokkan (1967) as the criteria that divide the members of a community into groups, they distinguished between three classes of cleavages: ascriptive or trait; attitudinal or opinion; and behavioral. Their now-famous index of fragmentation, the probability that two randomly chosen individuals in a community will belong to the same group, allows for comparisons of community diversity along a single cleavage. Today, the Manifesto Research Group implicitly builds upon works by these scholars. Research in this tradition broadens the definition of social cleavages to encompass non-sociological divisions: conflicts do not have to be rooted in sociological traits. Additionally, while maintaining what is essentially a view of social cleavages as long-standing divisions between groups, it seems agnostic towards a definition that includes short-lived sources of conflict (say, along the lines of foreign policy).

Finally, more recent work in formal theory adopts a short-term, non-sociological definition. Cantillon (2001) studies the incentives provided by different electoral rules for parties to adopt emerging issues. She concludes that what she calls issue dimensions do change over time if such change is in the strategic interests of political parties. This definition of the abstract concept of interest encompasses a wide variety of sources of division, from non-partisan issues such as corruption to partisan issues such as environmental regulation or affirmative action. Further, attention is not confined solely to long-standing conflicts. By accepting the possibility of change in the cleavage structure and by making political actors its agent, short-lived conflicts are included in the definition: they are picked up and then discarded by parties as the strategic game of competition demands. A similar perspective is taken by the realignment literature, which primarily contains case studies of party system change (Sundquist 1973, Butler and Stokes 1969, Burnham 1970). While the realignments studied are short bursts of change, both followed and preceded by equilibrium, it is the fact that change occurs that aligns these two literatures. Both recognize that short-lived divisions of many types sometimes emerge and are consequential for the structure of com-

such as skin color are placed at the high end of the scale and occupation or place of residence at the low end. They define the types of attributes that fall from the high to the middle end of the scale as ethnic and the types of attributes that fall towards the low end as non-ethnic. van der Veen and Laitin, as noted, apply the term 'stickiness' to this concept. These definitional parameters allow for more fine-grained distinctions than does the dichotomized sociological vs. non-sociological conceptual dimension utilized by this thesis. For example, race and religion are both sociological and sticky relative to foreign policy preferences, but we would clearly view race as much stickier than religion.

petition. Here, then, is another perspective on social cleavages: one that defines them as non-sociological and potentially short-term phenomena.

The remaining definitional matter concerns where social cleavages or preferences are situated in their evolution from latent divisions between individuals to lines of full-fledged political conflict. Few scholars fail to recognize that what are usually called 'political cleavages', divisions institutionalized in the party system, are endogenous when push comes to shove. What is to some extent a straw man opposition is cited as assuming a one-to-one relationship between latent divisions and these 'political cleavages', i.e., that the former are objectively and automatically translated into the latter.[3] Yet even scholars such as Lipset and Rokkan, who are usually viewed as proponents of sociological determinism, do not adopt this position. Below, a rough two-stage process of what Carmines and Stimson (1989) call issue evolution (for lack of a better term) is extracted from the literature.[4]

First, latent cleavages are politicized, creating political cleavages. By political cleavages, the thesis means criteria that divide the electorate into self-aware and organized groups based on their preferences related to the criteria. In the constructivist literature, politicization is often described as an identity category becoming either salient (van der Veen and Laitin 2004) or activated (Chandra and Boulet 2003). For example, religion may divide citizens. Those who are secular may share an identity and organization that differs from the identity and organization shared by those who are religious. Differences in identity between the two groups should encompass differences in beliefs about important issues such as the proper relationship between church and state. If a cleavage is latent or unpoliticized, groups are either not aware that they share a common identity or are not organized in a way that allows their interests deriving from the common identity to be expressed. In contrast, if a cleavage is politicized, groups both share a collective identity and are organized to express their interests.[5] Latent sociological cleavages, divisions around ascriptive traits such as race, may be translated into political cleavages; however, not all political cleavages have a sociological basis. For example, most students of Israeli politics would

[3]Zuckerman (1975, 237) distinguishes between the deterministic approach that views social divisions as a "necessary and a sufficient condition" for the emergence of political cleavages and the non-deterministic approach that views them as either a "necessary but not a sufficient condition" or "neither a necessary nor a sufficient condition". We might re-phrase his description of the former approach as 'given a group, a political party will form to represent the group.' Astute observers of the late 1980s might term this the Ray Kinsella approach: build it (a baseball diamond in an Iowa cornfield or an ethnic group) and they (the Chicago White Sox or a political party) will come. Several recent studies that highlight the difference between the two approaches include Chhibber and Torcal (1997), Torcal and Mainwaring (2003), and Chhibber and Kollman (2004). However, one is hard pressed to actually identify modern political science scholarship that endorses the Ray Kinsella approach. A large proportion of the electoral and party systems literature recognizes that something or someone intervenes to turn social divisions into political conflicts. What usually happens is that scholars simply omit (for whatever reason) a discussion of this process. Most literature that assumes objective and automatic translation is from other sub-disciplines or fields, such as religious studies, history, conventional area studies, and sociology.

[4]This discussion draws primarily from Cantillon (2001) and Cox (1997), who in turn draws from Jaensch (1983) and Meisel (1974).

[5]Defining political cleavages in terms of two criteria, organization of some sort that allows the realization of collective action (e.g. schools, unions, interest groups, clubs, newspapers, etc.) as well as common interest, follows a long tradition in this literature (e.g., Bartolini and Mair 1990). In contrast to studies that omit the first stage of the two-stage politicization process discussed here, the organization is not required to take the form of a political party at this stage. Clearly, in the absence of common interest, organization is unlikely. As the thesis will argue later when it endogenizes political cleavages, common interests do not presume organization.

identify the foreign policy conflict over the future boundaries of the Israeli state as one of the most virulent contemporary political cleavages in Israel (Dowty 1998). Additionally, not all latent sociological cleavages may be politicized. For example, gender—an ascriptive division more enduring than any save perhaps race—has historically not been politicized in many countries (Kaplan 1992, Lovenduski 1986). The key point is that even seemingly exogenous and natural sociological political cleavages such as race do not "happen spontaneously as reflections of objective conditions in the psyches of individuals" (Przeworski and Sprague 1986, 7). Ultimately, all primordial identities are politically forged (Laitin 1986, 159–60).

Second, political cleavages are particized, that is, made into important lines of partisan division. Particized cleavages are on the political agenda in the sense that political parties address and take positions on the issues that derive from them. For example, socioeconomics—the debate about the role of the state in the operation of markets—has in modern history been an if not the most important source of partisan conflict (Budge, Robertson and Hearl 1987, Budge et al. 2001). Simplistically, this cleavage divides parties into two groups, those that support an economically interventionist state (the left) and those that do not (the right). An important point to consider about this second stage of issue evolution is that not all politicized conflicts will be particized. Either political elites may deliberately suppress the particization of particular political cleavages or there may simply be little strategic incentive for elites to adopt them.[6] There is no guarantee that parties and voters are "in the same space," and in fact they are likely to not be (Budge, Robertson and Hearl 1987, 393). Symptomatic of the particization of a cleavage is an issue working its way into party platforms within the existing party system or a re-structuring of the party system whereby new parties emerge to take up particular cleavages.[7] New parties can either replace or supplement existing parties.

Comparativists have generally focused on the second stage in the process of issue evolution although there is disagreement about which stage is the proper object of study. Specifically, many comparativists use the terms 'political cleavages' and 'social cleavages' to mean what are referred to here as 'particized cleavages' and 'latent cleavages,' respectively. The first stage of the process is frequently omitted altogether and the distinction between latent and politicized cleavages elided over at inopportune moments. Others, a minority, use terms such as 'identity' to refer to what the thesis terms 'political cleavages' and endogenize both it and particized cleavages (e.g., Kalyvas 1994). A hypothesis accounting for the traditional focus on the second stage is that where democracy is the rule of the game, particization is viewed as the key to changing the status quo of a conflict. Political parties in party-centered democracies and parties plus political representatives in candidate-centered

[6]See, for example, Carmines and Stimson (1989) on the racial cleavage in American politics. The point here, as emerges from van der Veen and Laitin (2004) and will be developed at greater length in Chapter 6, is that particization results from the choices of political entrepreneurs.

[7]Note that there is an important ambiguity in this discussion about what constitutes multi-dimensionality in the particized ideological space. For example, consider a two-dimensional space with a socioeconomic (L–R) cleavage as the x-axis and an anti-clerical–religious cleavage as the y-axis. Let there be three parties. If the parties take positions represented by the (x, y) coordinates in this plane of $(-1, -1)$, $(0, 0)$, $(1, 1)$, should the particized ideological space really be considered two-dimensional? A straight line in this plane, which has one dimension, describes their positions perfectly; alternatively, rotating the plane 45 degrees reveals the one-dimensionality of the party positions. However, the parties do each stake out positions on issues related to socioeconomics and religion (e.g., these issues will feature in their manifestos). The thesis will return to this point later in the chapter.

ones pull the strings that apply the massive coercive powers of the modern state. While there are alternative methods for upsetting the status quo in some places and time periods, e.g. the judicial process in the United States, substantive change usually involves political parties setting the wheels of bureaucracy in motion.[8] A two-stage view of politicization is adopted here because of its more detailed (and presumably accurate) representation of the causal process. Objections that may be raised to this two-stage process include the direction of the causal arrows, an issue that a later chapter will address.[9]

Either implicitly or explicitly, then, scholars have disagreed about how the abstract concept of interest should be defined with respect to three conceptual dimensions. By mapping the abstract concept to different values along each of the three dimensions, we can generate different definitions of our variable. In fact, the social cleavage or preferences variable has stood for many types of conflicts due to just this sort of differential mapping. To illustrate, the Manifesto Research Group's 'party policy dimensions', identified from party platforms, are particized, non-sociological, and long-term cleavages. Cox's (1997) 'social cleavages' are latent, sociological, and long-term cleavages. Inglehart's (1984) 'political cleavages' refer at times to politicized and at other times to particized, non-sociological, and usually (but not always) short-term cleavages.

Note that there is no necessary relationship between the values a definition adopts along the three conceptual dimensions. For example, one could define social cleavages either as long-term, sociological, and politicized divisions or as short-term, non-sociological and politicized divisions. However, those who have adopted a non-sociological perspective have almost exclusively mapped their variable to either the political or particized points on the conceptual dimension of issue evolution. In this case, by the very nature of a focus upon attitudes, opinions, and ideologies, it is difficult to view preferences as latent, when individuals usually have no awareness of their interests. In fact, most scholars writing in this tradition have regarded sociological traits merely as bases for communal action, not to be equated with groups capable of it. Conversely, those who have adopted a sociological perspective have frequently studied the latent stage in issue evolution.

The nutshell of this story is that there are different kinds of preferences that might distinguish between polities. Once we move beyond the abstract, general concept of societal input into the political process and start to think concretely about defining and operationalizing this variable, we are confronted with this fact. The type of preferences that appears in theories and empirical work, embodied in the values taken along the three conceptual dimensions of a definition discussed in this section, might be consequential for the conclusions drawn. Scholars should be more careful than they have been in alerting readers to the definition of their variable, whether it is employed on the left-hand side (a variable that

[8] Again see Carmines and Stimson (1989). The civil rights movement—non-violent action along a politicized racial cleavage—might have been sufficient to provoke wide-spread change in the social, political, and economic circumstances of African-Americans in the United States given both determination and time, although counterfactuals of this sort are inherently difficult to evaluate. Historically speaking, however, rapid and significant change in African-Americans' day-to-day life experiences followed the particization of the racial cleavage in the 1960s, when the federal government used both carrots and sticks in public policy to overturn the discriminatory status quo.

[9] That is, the thesis initially assumes that politicized cleavages are exogenous to political competition and particized cleavages. Parties develop issue agendas in anticipation of electoral behavior, which are a function of voters' tastes or preferences. They do not fashion the political cleavages that structure voters' preferences. Przeworski and Sprague (1986) famously demonstrated the untenability of this assumption, but it is one that is both commonly made and useful for the time being.

itself deserves explanation) or on the right (a variable useful in accounting for variance in other important political outcomes).

This is not to say that there is a single correct definition. Rather, "how scholars understand and operationalize a concept can and should depend on what they are going to do with it" (Collier and Alcock 1999, 539). In other words, scholars should justify their definition and operationalization of abstract concepts in light of the goals of their research; others can then evaluate the merits of their arguments. For example, the long-term, sociological definition confines attention to a subset of the phenomena studied by the short-term, non-sociological definition. What are the relative merits of the less restrictive latter and more restrictive former definitions? Scholars should but unfortunately do not ask such questions in the electoral and party systems literature. A useful contrast is provided by the democratization literature, where Przeworski et al. (1996) revitalized a debate about the proper definition and operationalization of democracy.[10] Debates of this kind are important because they reveal precisely which hypothesis empirical work is testing and the defensible scope of conclusions that can be drawn. They are also important because empirical tests of poorly specified hypotheses contribute little to our stock of knowledge.

2.1.2 And the Definition Is...?

Differences aside, the various definitions discussed above have significant overlaps. Any common elements reflect a scholarly consensus about how the abstract phenomenon of interest should be defined. The first element of a minimal definition of preferences is the criteria that divide a political community into groups, whether the criteria are issues such as foreign policy or ascriptive traits such as race. The number and type of criteria combine with the number of groups generated by each to characterize what this thesis will henceforth call the cleavage structure of a polity.[11] The second element is that political communities may be divided by a plethora of criteria. For example, from the sociological perspective, a political community may be divided by several sociological traits such as religion, race, and class. Similarly, from the non-sociological perspective, several issue dimensions such as the economy, foreign policy, and race may divide a political community. Operationalizations of all preference variables, however defined along the three conceptual dimensions discussed in the previous section, must at a minimum reflect these two definitional elements to attain validity.

To elaborate, this definition of a cleavage structure builds upon Posner (N.d.), who in turn builds upon Sacks (1992). Posner's discussion of ethnic cleavages, ethnic groups, and ethnic cleavage structures helpfully illuminates the differences between the more general concepts of cleavages, groups, and cleavage structures that concern us. First, he equates ethnic groups with Sacks's 'identity categories', the group labels that people use to de-

[10] See, for example, Alvarez, Cheibub, Limongi and Przeworski (1996) and Collier and Alcock (1999) to get a flavor of this debate.

[11] Note that for simplicity, the ideological space—to use terminology from the spatial literature—is effectively discretized by this definition. The conventional spatial model defines the cleavage structure as the ideological space (the number and nature of dimensions) and individuals' multi-dimensional ideal points in this space, which are vectors in $\mathbb{R}^n$. Here, the ideal points are sets. Each element corresponds to an individual's position on a dimension and is itself an element of a discrete set of possible positions. These positions may be either ordered or unordered. In the latter case a spatial model cannot be used, but more general types of analyses have been developed in the formal theory literature to accommodate such cases.

fine who they are. Examples include 'Orthodox Jew', 'dove', 'hawk', and 'aethist'. These identity categories are the building blocks of the social groups this thesis discusses. Second, Posner's ethnic cleavages are equivalent to Sacks's 'category sets', the lines of division into which identity categories can be sorted. Examples include religion and foreign policy, which obviously correspond to what this thesis has called cleavages or ideological dimensions. Third, Posner's ethnic cleavage structure combines the two. It is simply known here as the cleavage structure. Constructivists such as Chandra and Boulet (2003) employ the terminology 'identity category' similarly to Posner and Sacks, although they add an additional conceptual distinction by introducing 'types of attributes', such as skin color and place of birth, which are constitutive of identity categories. As they argue, given a domain of analysis, their 'types of attributes' describe the inputs into the production of categories, while the term 'dimension' or 'cleavage' describes the output.

In an attempt to improve clarity, the rest of the thesis drops the use of the term 'social cleavages'. Instead, it explicitly maps the abstract concept of preferences onto the three distinct conceptual dimensions identified in the prior section: stage in issue evolution; sociological vs. non-sociological divisional nature; and divisional persistence. Specifically, viewing the stage in issue evolution as the most important of these definitional parameters, the thesis refers to latent, political, and particized cleavages (sometimes substituting the terms preferences, cleavage structure, ideological space, or dimensions for the word 'cleavages')[12] as defined above without, for the moment, taking a position with respect to the definitional issues of divisional nature and persistence. Note that the emphasis placed on the stage in issue evolution is not intended to obscure the existence of the two other definitional parameters or to suggest that the three automatically bundle together. The three parameters represent distinct aspects of any conceptualization of preferences, although with varying degrees of importance to theory-building. Trichotomizing the abstract concept according to the issue evolution definitional parameter merely reflects the judgment of the thesis that this parameter is the most consequential. Throughout, the thesis will use the term 'preferences' to refer to the general, abstract concept of social inputs into the political process.

No thesis would be complete without staking its own claim to the contested definitional field. Comments accordingly seem in order about the merits of the various possible values along the three conceptual dimensions. Other definitional matters that deserve attention, such as important clarifications that have repercussions for later analyses, are also dealt with below.

First, with respect to the most fundamental definitional parameter, the stage of issue evolution, a review of the comparative politics literature leads one to conclude that countries might differ in the number and nature of their latent, politicized, and particized cleavages. To merely speak of preferences is not enough; we need to assess the variance in the latent,

[12]Zuckerman (1975) makes the point that the word 'cleavage' has semantic baggage: it denotes a specific kind of division, one along natural lines. Indeed, its predominant use is by those writing in the sociological tradition, while those in the non-sociological tradition tend to employ the words 'division', 'dimension', 'preferences', and 'issues'. The word 'cleavage' has not been jettisoned here in favor of these other words, despite the definition that will be shortly proposed, in order to maintain some continuity with past scholarship. In contravention of the dictionary definition, then, 'cleavage' as used in this thesis is synonymous with 'division'. If anything, it implies a consequential (large-scale) division but nothing more. Zuckerman himself uses 'cleavage' similarly to imply a sub-set of political divisions, although for him it refers to divisions that are both large-scale and persistent.

politicized, and particized cleavages that structure political life in democracies around the globe. The remainder of the thesis will independently consider variation in all three. But why not simply choose a value along this conceptual dimension? Does not one value yield a definition that is superior to others? Unfortunately, there is not a clear-cut answer in this case. Which definition should be employed depends upon a scholar's research goals, as Chapter 3 will argue in the context of models for party system fractionalization.

Second, with respect to the conceptual dimension of divisional nature, the thesis is sympathetic to the minimalist stance taken by Alvarez et al. (1996, 4), who argue that

> "Almost all normatively desirable aspects of political, and sometimes even of social and economic, life are credited as definitional features of democracy... From an analytical point of view, lumping all good things together is of little use. The typical research problem is to examine relations between them. Thus, we may want to know if holding repeated elections induces governmental accountability, if participation generates equality... Hence, we want to define democracy narrowly".

This debate about how democracy should be defined can shed useful light on the debate surrounding the definition of preferences outlined above. Political and particized cleavages may or may not have a basis in the ascriptive, sociological identities of a polity's citizens.[13] Conflating the two by definition precludes us from asking many important questions, such as how variation in the sociological basis of politicized and particized cleavages affects political conflict and if cleavages with a sociological base are in fact more persistent than those without. Hence, the inclination here is towards the more general—less restrictive—definition, what this thesis has termed the non-sociological value along the conceptual dimension of divisional nature. This leaves "the tie to social divisions... to hypothesis" (Zuckerman 1975, 236). Throughout, the thesis makes a special effort to measure non-sociological cleavages. In this respect, it differs significantly from much existing electoral and party systems scholarship, particularly that with roots in the political behavior literature.

Third and finally, with respect to the remaining conceptual dimension, divisional persistence, choice of a long- vs. short-term definition again depends on a researcher's goals. If the dependent variable is the party system in a particular election, then the most proper independent variable seems to be the cleavages relevant at that moment in time, which may include transitory cleavages. If the dependent variable is an average over time or another measure of the party system in equilibrium, then the independent variable should correspondingly be the equilibrium or persistent cleavages. Both of these definitions are employed by the thesis. The practical problem of insufficient time series data combined with the fact that the latent cleavage structure usually changes slowly over time[14] leads to the latent preference variable being defined primarily as long-term for the purposes of this thesis. Conversely, theory suggests that short-term changes in political and particized

[13] Allardt and Pesonen (1967) distinguish between 'structural' and 'non-structural' particized cleavages. In the former case, the particized cleavage corresponds to a politicized, sociological cleavage; in the latter case, the particized cleavage corresponds to either a politicized but non-sociological or a non-politicized (latent) sociological cleavage.

[14] Fearon (2002, 30) makes this point with respect to the ethnic cleavage structure of polities. He found that "recent population estimates [of ethnic groups]... showed a remarkable degree of consistency" with older, post-colonial estimates. Similarly, Fearon and Laitin (2003*a*, 4) note that with a few exceptions, the religious cleavage structure did not appear to change much over time. Change that does occur in latent cleavage structures will almost always take place over generations, although Chandra and Boulet (2003, 2) are certainly correct to argue that "a country's ethnic demography... is not fixed but changes over time".

preferences both occur and might be consequential for political outcomes of interest such as the party system. Available data combined with this theoretical insight leads the thesis to primarily define these variables as short-term. In general, though, the inclination here is again to favor the less restrictive definition, that generated by the choice of the short-term value on the conceptual dimension of divisional persistence.

Hence, the use of the terms 'latent cleavages' or 'latent preferences' throughout the remainder of the thesis will refer to non-sociological, long-term, latent cleavages unless otherwise noted. Similarly, the use of the terms 'political cleavages' or 'politicized preferences' will refer to non-sociological, short-term, politicized cleavages and the terms 'particized cleavages' to non-sociological, short-term, and particized cleavages. A few clarifications and elaborations are necessary before continuing on to a review of existent operationalizations of the three variables. We begin with the definition of latent cleavages.

The variable of latent cleavages has a different flavor from that of its cousins, political and particized cleavages. A few examples may help to flesh out the approach to this variable. Religiously diverse but ethnically homogeneous and isolationist or neutral modern, industrial countries are likely to have two cleavages, religion and socioeconomics. Conversely, a similar but religiously homogeneous polity is likely to only have one cleavage, socioeconomics. The most famous variant of this argument is the Lipset and Rokkan (1967) thesis. They argued that countries with a large Catholic minority in Western Europe were characterized by clerical–anti-clerical politicized and particized cleavages, whereas predominantly Protestant countries were not, religious issues having been settled during the Reformation. Hence, by this argument, greater latent diversity of religious affiliation in the Netherlands than in the United Kingdom led to a corresponding greater diversity of politicized and particized preferences. The religious cleavage was both politicized and particized in the Netherlands but only (at most) politicized in the United Kingdom, as evidenced by the existence of expressly religious parties in the former but not in the latter. A similar argument has been made with respect to ethnicity. Whether primarily defined in terms of language or race, ethnic heterogeneity—the presence of more than one ethnic group—is likely to give rise to a politicized and particized ethnic cleavage, with greater heterogeneity producing more politicized and particized groups along the ethnic cleavage. Lipset and Rokkan also offer a version of this argument, although they frame their discussion in terms of conflict between a political center and peripheral territories, which usually have distinct languages and cultures.

'Latent cleavages' as a variable is best thought of as the potential for politicized and particized cleavages. That is, as illustrated by the examples in the prior paragraph, a existence of latent sociological cleavage is determined by the heterogeneity or homogeneity of a country in terms of an objective sociological characteristic such as religion, ethnicity, race, or class. If the country is homogeneous in terms of the characteristic, neither the corresponding political nor particized cleavage can emerge; if it is heterogeneous, emergence is somewhere between possible and likely. Somewhat differently, a latent non-sociological cleavage exists to the extent to which a country exhibits characteristics that are likely to lead to the formation of a corresponding political or particized cleavage. For example, a country's involvement in foreign military conflicts is a flash-point for debate and increases the probability of politicized and particized cleavages forming around foreign policy issues. For latent sociological cleavages, then, the focus is on the groups produced by dividing the community along the sociological characteristic, since this provides the necessary informa-

tion about a community's heterogeneity. For latent non-sociological cleavages, the focus is on the likelihood of conflict along the criteria, measured not in terms of groups but in a manner relevant to the criteria, such as the number of military conflicts within a given time period. Countries with greater latent preference diversity are viewed as more likely to exhibit politicized and particized preference diversity. Such countries, the thinking goes, are characterized by either many latent cleavages or many groups generated by each latent cleavage, or both. Latent preference diversity is defined as the number of latent cleavages, where the presence or absence of a latent cleavage is determined as described above. The key throughout is the notion of exogeneity: the focus on 'objective' characteristics of society supposedly ensures that they are exogenous to political institutions and competition. However, as Chandra and Boulet (2003) argue on behalf of the large constructivist literature addressing ethnic demography, the common assumption that latent sociological cleavages are exogenous to the process of interest, here party competition, is seriously flawed. This topic will be addressed in greater detail both by a later section of this chapter and by later chapters.

In contrast, for political and particized cleavages, the focus is on the number and identity of the cleavages, not the groups formed along them. The reasoning behind this decision is that while both the groupings along cleavages and the cleavages themselves are malleable, groupings seem the most malleable. That is, groups generated by political cleavages are the result of strategic behavior on the part of the entrepreneurs who organize them as well as the individuals who identify with and contribute to them. In non-discrete terms, the voter distribution over a particular issue dimension is shaped by strategic behavior on the parts of both individuals and elites. In the short run at least, it seems more plausible that strategic behavior might affect the particular groups with which individuals identify (more generally, the political views that individuals hold) than the set of ideologies that underpin their understanding of the political world. Similarly, how parties position themselves along a given issue dimension is a highly strategic and iterative (frequently updated) decision, the subject of the large spatial literature dating back to Downs (1957). The introduction of new dimensions, while also strategic, occurs less frequently and is viewed as having far-reaching consequences for political competition. In general, groupings are conditional on the cleavages. The more fundamental nature of the latter justifies the focus advocated here. Some may certainly disagree with this perspective, which will be developed at greater length in Chapter 6, but the remainder of the thesis adopts the position of identifying and counting political and particized cleavages instead of groups. Accordingly, countries characterized by politicized and particized preference diversity have many politicized or particized cleavages, a definition that makes no reference to groups.

Another important issue in need of clarification is how overlapping, or reinforcing, cleavages should be treated. Take, for example, the historically near-orthogonal clerical–anti-clerical (religious) and free market–controlled economy (socioeconomic or 'left–right') cleavages. Scholars such as Inglehart (1984) argue that the latter has assimilated the former in advanced industrial democracies. That is, these cleavages are now overlapping instead of cross-cutting, with leftist economic views increasingly associated with secularism and rightist economic views with religiosity. Parties and individuals may address and take positions on both of these types of issues, but the positions they take hang together in predictable ways. Knowing a person's or party's position on one cleavage allows us to predict her or its position on the other. Should such societies be considered to have two cleavages, reli-

gion and socioeconomics, or merely one? In spatial terms, this corresponds to individuals and/or parties being concentrated around, say, a line passing through the coordinates (0, 0) and (1, 1) in the Cartesian plane instead of scattered widely over the plane. In discrete terms, this corresponds to the socioeconomic and religious criteria for dividing members of a community into groups yielding the same partition of the set of individuals, i.e. the individuals in the community with socioeconomic trait S_1 (e.g., manual workers) all have (and are the only members of the community that have) religious trait R_1.

Theoretically, it seems hard to argue against counting the two cleavages as one particularly virulent cleavage. As Laver and Hunt (1992) argue, this is a natural extension of the assumption that preferences are exogenous to political competition. Practically speaking, however, it is difficult to determine if cleavages cross-cut or overlap. Further, as Rae and Taylor (1970, 14) argue, "virtually all extant cleavage systems result in some cross-cutting and... none result in complete cross-cutting; the pertinent question is not whether cleavages cross-cut each other, but rather how much they cross-cut each other." This, too, is a difficult question to resolve empirically. Ideally, then, we would like to count significantly overlapping cleavages only once and define the cleavage structure as all orthogonal or near-orthogonal cleavages. Principal components analysis, one technique for operationalizing political and particized cleavages, allows the identification of such underlying structures, as do similar statistical tools such as confirmatory factor analysis. However, data that allows the use of this technique is not always available (for example, latent cleavages are usually operationalized using aggregate data) or its use may have undesirable repercussions that do not outweigh the identification of the cleavages that overlap. Consequently, the best that can often be done is to identify all existent cleavages, including some that may significantly overlap with others. On a more positive note, this allows us to endogenize preferences—to explain why it is, say, that political parties cluster tightly around a 45 degree line through the origin in a Cartesian ideological space. In other words, we are faced with a "clear intellectual challenge to explain why large sections of the space are uninhabited" (Laver and Hunt 1992, 23–4).[15]

In conclusion, it is worth reiterating an important point about the definition of politicized preferences used here. The approach to political cleavages taken by this thesis corresponds to what Budge and Farlie (1978) have called 'policy-defined space', although the dimensions are ideologies instead of issues. Political cleavages reside within voters' minds and are expressed by what may be called their opinions, attitudes, or values. As such, the members of a group generated by a cleavage perceive a shared interest; in other words, the cleavage "engages some set of values common to members of the group" and members know a "common life" (Knutsen and Scarbrough 1995, 494). Latent cleavages, in contrast, do not generate a set of common values and life that is institutionalized in organizational form. This distinction has a long pedigree: it corresponds to the distinction Marx drew between a 'class in itself' (*Klasse en sich*) and a 'class for itself' (*Klasse fuer sich*). The former

[15]Contra to Laver and Hunt (1992), estimates of what they call the 'real' dimensionality of the space are developed in Chapter 4 of the thesis. Of course, to a large degree Laver and Hunt are correct to argue that all empirical estimators are conditioned by the particular state of political competition. Nevertheless, we can estimate the extent to which both socio-economics and social policy, to use their example, are salient dimensions, even if data reduction techniques would argue for their representation by one underlying 'socioeconomic left–right' dimensions. This is at least a first stab at an estimate of a 'real' space, albeit one that is conditioned on a priori beliefs about the set of dimensions that should be considered potentially relevant.

may be described as a latent cleavage but only the latter, where the class is conscious of its shared interests and capable of acting on them, is a political cleavage.[16] Accordingly, this thesis views only political and particized cleavages as capable of impacting the political world. If the world is a stage, latent cleavages are actors waiting in the wings.

2.2 Existent Operationalizations

2.2.1 Latent Cleavages

Existing operationalizations of this variable are culled from a variety of literatures in comparative politics, from civil war to economic growth to electoral and party systems. Numerous qualitative operationalizations exist, such as Lipset and Rokkan's (1967) own study, but these are either case or small-N studies that do not produce a measure appropriate for statistical analyses. Until recently, quantitative operationalizations sought to characterize a country's latent cleavage structure and preference diversity in terms of one sociological cleavage such as ethnicity or religion, with ethnicity being the most frequently utilized cleavage. Most have measured heterogeneity along the cleavage using either Rae and Taylor's (1970) index of fragmentation,[17]

$$F = 1 - \sum_{i=1}^{n} p_i^2 \ ,$$

or the effective number transformation of this index popularized in comparative politics by Laakso and Taagepera (1979),

$$N = \frac{1}{\sum_{i=1}^{n} p_i^2} \ ,$$

where

$$N = \frac{1}{1 - F} \ ,$$

p_i is the population share of each group, and the summation is taken over all n groups. These two measures carry equivalent information.[18] Some comparativists have preferred

[16] Marx viewed it as axiomatic that the potential for class conflict inheres in all differentiated societies, i.e. those where individuals' relationships to the means of production grant unequal access to scarce resources and power. However, he was quite careful to note that differentiation need not always lead to conflict. Common interests must first develop among similarly situated individuals, which occurs when such individuals repeatedly interact in particular social circumstances.

[17] Somewhere along the line, the phrase 'index of fractionalization' became associated with this measure in addition to the original 'index of fragmentation.' No attempt has been made to trace the source of the former term; it suffices to note that both are in use in the literature. The thesis likewise uses the two terms interchangeably.

[18] The measure N defined above is closely related to a member of the family of Rényi entropies, which are used in information theory to measure the amount of uncertainty in a probability mass function (Cover and Thomas 1991). This member is the quadratic Rényi entropy. Other members lead to different measures: for example, alternatives are $N' = n$, the number of groups, or $N'' = \frac{1}{\max(p_i)}$, the reciprocal of the largest population share. These three measures quantify different properties of the sequence $p_1, p_2, \ldots, p_n$. In comparison, F, a transformation of N, and N quantify the same properties and thus can be viewed as equivalent measures, to be contrasted with alternative measures such as N' and N''. Rényi entropies are defined by a parameter $\alpha \in [0, +\infty]$. N' has parameter $\alpha = 0$, N has $\alpha = 2$, and N'' has $\alpha = +\infty$. Increasing α emphasizes larger groups and provides greater robustness to incomplete information about the smaller groups. In a way, N is a compromise between the two extremes N' and N''.

the effective number of groups, N, because of its more intuitive interpretation. The thesis will argue later that there is reason to prefer either the index of fragmentation, F, or the log of N on empirical grounds despite the less intuitive interpretation. Nevertheless, the index of fragmentation and the effective number of groups represent essentially identical operationalizations of the abstract concept of diversity.

It used to be the case that ELF, an index of fractionalization constructed from an atlas of ethno-linguistic groups and population figures compiled by Soviet geographers in the early 1960s (Bruk and Apenchenko 1964, Taylor and Jodice 1983), was the only game in town for scholars seeking to measure ethnic heterogeneity. Ordeshook and Shvetsova (1994) pioneered the use of this operationalization in the electoral and party systems literature. They also used an updated version of the atlas (Bromlei and Arut'i'unov 1988) to produce data on this variable at a second time point.[19] However, political scientists and economists working in the civil war and economic growth literatures, respectively, have recently developed alternative operationalizations. Fearon (2002) sought a more up-to-date measure of ethnic diversity. He derived his own cross-national list of ethnic groups comprising at least 1% of a country's population and population figures for the early 1990s. His definition of an ethnic group, which incorporates 'groupness', shared culture (including religion and language), and membership by descent, is broader than the primarily linguistic definition employed by the Soviet geographers.[20] Alesina, Devleeschauwer, Easterly, Kurlat and Wacziarg (2003) derived a similar data set for the 1990s that also employs a broader definition of ethnicity, although they do not exclude groups comprising less than 1% of a polity's population. These three data sets on ethnic structure allow us to compare the impact of differences in sources, time periods, definitions of ethnicity, and coders on the standard operationalization of ethnic heterogeneity, the index of ethnic fractionalization. While the overall correlations between the fractionalization indices derived from the three data sets are reasonably high, there are enough differences to warrant a sensitivity analysis for empirical models that employ one of them.[21] Relatedly, Alesina et al. (2003) constructed a data set of linguistic groups that generates an index of linguistic fractionalization. This index of linguistic fractionalization is also reasonably correlated with indices of ethnic fractionalization such as ELF.[22]

The possibilities do not end here. As suggested above, ethnicity is only one potential latent cleavage. Religion immediately comes to mind as a second, one that has historically

[19] Roeder (2001) has helpfully created a dataset containing several versions of ELF at two time points, 1961 and 1985, based on the same two Soviet atlases.

[20] Note that Fearon's (2002) data for Africa and overall approach is based on Scarritt and Mozaffar (1999), whose list of ethnic groups is of politically relevant (politicized) groups. The latter's resulting fractionalization index is by explicit construction no longer a measure of latent preference diversity. Fearon (2002, 13) breaks with their definition because he finds their requirement of political significance "too restrictive"; however, he still strives to only count groups that evidence 'groupness', some sense of common identity. As he notes, the extent to which this requirement is met in some cases (primarily in Asia and Africa) is unclear. Regardless, one could certainly argue that operationalizations derived from Fearon's data do not measure the latent cleavage variable. I include it here because others have used it this way (e.g., Golder and Clark 2003).

[21] Fearon (2002, 30) reports a correlation of 0.75 between the measure of ethnic fractionalization based on his data and ELF as well as similar correlations between the measure based on Alesina et al.'s data and ELF.

[22] Alesina et al. (2003, 162) report correlations of 0.88 between ELF and their linguistic fractionalization index and 0.70 between their ethno-linguistic and linguistic fractionalization indices.

been viewed as more important than ethnicity and language in the party systems and voting behavior literatures (Rose and Urwin 1969, Lijphart 1971*a*, Lijphart 1979). Alesina et al. (2003), Fearon and Laitin (2003*a*), and Annett (2001) have all constructed cross-national lists of religious groups and population figures, the former two for the 1990s and the latter for the 1980s.[23] The former relies upon Barret (1982) and defines the population of religious groups to be fifteen major world religions or denominations, of which only Christianity is disaggregated.[24] Alesina et al. (2003) and Fearon and Laitin (2003*a*) do not seem to limit themselves to a pre-defined population of religious groups. I have not seen Fearon and Laitin's list of groups, but Alesina et al. follow their source, the *Encyclopedia Britannica Book of the Year*, in allowing the level of aggregation to vary across countries (Christianity is usually disaggregated; Islam is sometimes disaggregated; Judaism is never disaggregated). As before, the overall correlations between the fractionalization indices derived from the different data sets are reasonably high while reflecting differences.[25] However, pairwise correlations between the religious fractionalization and either the ethnic or linguistic fractionalization indices are low, as one might expect.[26]

Scholars have also made attempts to move beyond the fractionalization index. As Fearon (2002, 18) notes, "many hypotheses and arguments in the literature refer not just to measures of ethnic diversity like [ethnic fractionalization], but to more fine-grained conceptualizations of ethnic structure," such as highly fragmented, bipolar, or dominant majority structures. Future work that refines hypotheses in the currently theoretically underdeveloped electoral and party systems literature should certainly pursue the development and use of such alternatives. In the economic growth literature, Montalvo and Reynal-Querol (2000) propose an index of religious polarization based on the data sets described above,

$$P = 1 - \sum_{i=1}^{n} \left(\frac{0.5 - \pi_i}{0.5} \right)^2 \pi_i \ ,$$

where p_i is the population share of each religious group and the summation is taken over all n groups. This index attains its maximum when there are two religious groups of equal size. In the civil war literature, Collier and Hoeffler (2000) and Fearon and Laitin (2003*b*) use various indicators of ethnic dominance: a dummy variable for one ethnic group comprising between 45 to 90 percent of a country's population; the share of the population belonging to the largest ethnic group; and a dummy variable that marks the countries whose largest and second-largest ethnic groups exceed 49 and 7 percent of the population, respectively. In

[23] Montalvo and Reynal-Querol (2000) also construct a cross-national list of religious groups and population shares based upon Barret (1982), as do Barro (1997) and Collier and Hoeffler (2000). To the best of my knowledge, none of these data sets are publicly available. No response has been received to a request in March 2004 (made to Montalvo, the corresponding author) for the Montalvo and Reynal-Querol data.

[24] These groups are Catholic, Protestant, Eastern Orthodox, Indigenous Christian, Crypto-Christian, Judaic, Muslim, Hindu, Buddhist, tribal, Chinese folk, traditional, other, non-religious, and aethist. Economists such as Montalvo and Reynal-Querol (2000, 2003) have relied upon the same source but use a thirteen-group classification, which does not disaggregate Christianity. Others, such as Barro (1997) and Collier and Hoeffler (2000), use a nine-group classification, which again does not disaggregate Christianity.

[25] For example, Alesina et al. (2003, 162) report a correlation of 0.837 between their and Annett's (2001) index.

[26] The reported pairwise correlations between Alesina et al.'s (2003, 162) religious fractionalization index and the following indices are: ethnic fractionalization based on their data, 0.14; linguistic fractionalization based on their data, 0.269; ELF, 0.37.

the electoral and party systems literature, Mozaffar, Scarritt and Galaich (2003) develop an ethno-political group concentration index, which is the sum over all groups of the population share of each group multiplied by its Minorities at Risk concentration code.

An important recent development is the more inclusive look some scholars have taken at the latent cleavage structure of a country. An overall scale of latent preference diversity has been constructed by combining an indicator of heterogeneity along one cleavage, such as the ethnic, religious, or linguistic fractionalization indices, with an indicator of heterogeneity along another cleavage. Collier and Hoeffler (2000) and Annett (2001) propose several ways in which to combine indices of religious and ethnic fractionalization. The former multiply the two and then add whichever yields the largest number to the product. The latter both multiplies the sum of the two by 1/2 and uses factor analysis to generate scores on a latent dimension of ethno-religious diversity. Of course, the simplest combination is the tried-and-true linear additive scale.

This survey of existing operationalizations reveals some glaring omissions. Some sociological cleavages such as the traditional worker-owner (class) or the urban-rural divisions, two of the four historically important cleavages identified by Lipset and Rokkan's (1967) seminal study, as nowhere considered. With respect to socioeconomic divisions outside of the traditional Marxist purview, new cleavages identified by postmodernists such as Inglehart (1984, 1990) between those employed in the manufacturing and service sectors or between the upper middle and lower middle plus working classes have also gone untapped. Further, latent non-sociological cleavages have received little attention: the thesis is aware of no operationalizations of latent preference diversity that attempt to capture a propensity for division on foreign policy or military conflict lines. An important point to emphasize in conclusion is that the latent preferences variable is defined at the aggregate level and is accordingly operationalized using aggregate-level data. While voting behavior studies have incorporated either traditional class or post-modern socioeconomic cleavages or both (e.g. Lijphart 1979, Kriesi 1998), their data and analyses are all at the individual level. Hence, they do not provide operationalizations of the abstract concept of interest to us here.

2.2.2 Politicized Cleavages

To date, few empirical studies have operationalized the variable of political cleavage structure or its close relative, politicized preference diversity. By far the most common strategy derives from the public opinion literature, which uses surveys to identify the position of individuals on a variety of issues. By aggregating these survey responses, the literature then makes inferences about the opinions of the electorate of the whole. The general notion is that political cleavages as this thesis has defined them should be visible in public opinion surveys. That is, the public should have opinions that 'hang together' about issues related to a politicized cleavage. For example, the existence of a racial political cleavage should be reflected in citizens caring about issues such as affirmative action, immigration, and segregation either in addition to or instead of expressing blatant racial prejudices. Further, their positions on these issues should vary systematically. For example, support for affirmative action might be linked with opposition to segregation and little opposition to immigration, while opposition to affirmative action might be associated with support for segregation and

opposition to immigration.[27] Clusters of opinions like these that are visible in surveys correspond to the groups generated by the cleavage. For example, in a predominantly white, Anglo-Saxon country these groups might simplistically be described as those who favor active government intervention to ensure racial equality and those who oppose intervention in favor of a discriminatory status quo. Membership in these groups may or may not be associated with either the actual race of individuals or their partisan groupings.[28]

Studies in the public opinion literature almost invariably use the statistical tools of principal components or factor analysis to identify the number and identity of the ideological dimensions underlying public opinion. An excellent example of this type of study is Jackman (1998). He utilizes public and political party candidate opinion data from the Australian Election and Candidate Studies and exploratory factor analysis to identify the cleavages that structure Australian public and elite political ideology prior to the 1996 election. The analysis reveals four cleavages structuring mass political ideology: union-related, 'the republic', women's rights, and a dominant racial cleavage. Four cleavages also structure political elites' ideology: immigration, union-related, 'the republic', and a dominant left–right cleavage. Confirmatory factor analysis is then used to determine the relationship between the four components of the electorate's and candidates' political ideologies. That is, it is necessary to discriminate between the null hypothesis of orthogonality, where each dimension cuts across the other dimensions at a right angle and attitudes towards one dimension are unrelated to attitudes towards others, and the alternative hypothesis of possible correlation between dimensions, where attitudes towards one dimension are related to attitudes towards others. For the mass electorate, Jackman finds that while the racial dimension is not uncorrelated with other dimensions such as republicanism and unions, it does cut across them. In contrast, political candidates' racial attitudes do not cut across the left–right ideological dimension; rather, they are a crucial component of that dimension, part of a general ideological debate that separates parties.

Most empirical analyses of this type are case studies of particular countries at particular times, e.g. Australia in 1996 as in Jackman's study. Such studies *might* be able to provide data on the cross-time variance of the political cleavage structure for the country in question. However, they cannot provide data on the cross-national variance of political cleavage structures due to the incomparability of the survey instruments used in each case study. Further, these case studies usually rely on national election surveys such as the NES in the United States and the New Zealand Election Study in New Zealand. Such surveys have historically been and largely continue to be a providence of advanced industrial democracies. Hence, case studies that measure the political cleavage structure using this strategy exist for only a small sample of the countries for which data should ideally be available. At any rate, this data could only be used in a cross-national statistical analysis if all of the case studies were based on similar (comparable) surveys and data reduction methods, which of course they are not.

[27] To illustrate, Jackman (1998) finds that a racially oriented ideological dimension is the most dominant force structuring the political ideology of the mass Australian electorate. It structures attitudes about immigration, aboriginals, and links with Asia, among others.

[28] To illustrate again using the analysis in Jackman (1998), two factor scores for each individual, the estimated positions of the individual on the racial and union ideological dimensions, are plotted against each other in a Cartesian plane. This yields a continuous instead of a discrete representation of the electorate's position in the ideological space. Jackman breaks down the electorate by partisan groups, which reveals parties drawing their supporters from different clusters of positions.

A second operationalization also uses public opinion survey data. Instead of using the statistical tools of factor analysis or principal components to uncover the structure of public opinion, however, it does so impressionistically. Responses to questions that are related to a few dimensions deemed theoretically relevant are compared, as are correlations between questions representing different dimensions. A few small-N studies of this sort do exist. For example, Evans and Whitefield (1998) compare the political cleavage structures in the Czech Republic and Slovakia in 1994, a 'most similar system' research design (Przeworski and Teune 1970). Evans and Whitefield (1994) perform a similar analysis for several Eastern European polities. While this approach may allow for cross-national comparisons, it is inherently qualitative: it does not produce a quantitative measure that can be used in statistical analyses, despite its ostensible focus on quantitative data.

The thesis is aware of only one existing operationalization of the politicized cleavage structure that provides comparable data on many countries. It is constructed using the former strategy although it additionally adds a time series dimension for a subset of the countries included in the analysis. Not surprisingly, it relies upon a public opinion survey that has been administered in many polities over time: the World Values Survey, carried out at four time points in an increasing number of democracies.[29] Moreno (1999) uses the second and third waves of the World Values Survey to identify what he terms the 'issue dimensions' of 33 countries. Of these countries, 55% are advanced industrial, 20% are Latin American, and 25% are post-communist (Eastern European plus former Soviet republics). For each country, he conducts a theoretically guided principal components factor analysis to determine the number and nature of its political cleavages. Two dimensions are adequate in advanced industrial polities, which he identifies as left–right materialism and postmaterial–fundamentalism. Three dimensions are adequate in post-communist polities: the dimensions of political and economic reform, left–right (or liberal–fundamentalism), and democratic–authoritarianism. Two dimensions are adequate in Latin American polities in the early 1990s and three dimensions in the mid-1990s; these dimensions are democratic–authoritarianism and economic left–right in the early 1990s with the addition of liberal–fundamentalism in the mid-1990s.

Since readers will likely object that several important studies have been neglected in the discussion so far, the next few paragraphs explicate why some well-known studies that seem to operationalize this variable do not in fact do so.

First, Inglehart (1984) uses the 1979 EuroBarometer[30] instead of the World Values survey to test his argument about the emergence of a cross-cutting post-materialist cleavage. Like many public opinion studies, he uses factor analysis; however, the factor analysis is not conducted at the national level—that is, nine factor analyses, one for each of the nine countries surveyed—but on the pooled survey sample. Accordingly, data on the issue dimensions of each of the nine European countries is *not* generated. This is a case study of the dimensions underlying the "issue preferences of Western publics" (36) in the then-European Community, not a source of data that allows the exploration of cross-national

[29]The first wave of the World Values Survey was conducted in 22 democracies in 1981–83; the second wave expanded the sample to 42 democracies in 1990–91; the third wave to 54 in 1995–97; and the fourth wave to 60 in 1999–2001.

[30]The EuroBarometer has been conducted annually in member states of the European Union, a small sample of all democracies, since 1973; surveys on special topics ("EuroBarometer Special Surveys") have been conducted occasionally since 1972.

variation in politicized preferences.[31] Similarly, both Inglehart's later individual work (e.g., 1990; 1997) and joint work with other scholars (e.g., Abramson and Inglehart 1995) do not yield the cross-national data desired. For example, Inglehart (1997) conducts a principal components factor analysis of the 1990 World Values Survey data where each observation is a country, with the mean score (over the sample of individuals surveyed) in that country used for each input variable to the analysis. This is again not an analysis of issue dimensions in each of the 43 countries included in the survey but an analysis of the issue dimensions in the meta-state comprised of all 43 countries. His research goals, which situate each country in a common politicized issue space instead of allowing the data to determine the extent to which such a space is shared by the countries, are not the research goals of this thesis.[32] As Inglehart (1997, 84) himself writes,

> "Brilliant and instructive books have been written about the ways in which given societies differ from others. This book focuses on the general themes underlying the cross-national pattern..."

Not surprisingly, the data that his study generates does not operationalize the variable of politicized preferences as it is defined by this thesis.

Second, Knutsen (1988, 1989) uses discriminant analysis to identify what he calls 'political cleavages' in ten West European democracies. This approach seeks to identify the so-called 'cleavage dimensions' most predictive of party preference, defined primarily as vote choice. Research of this sort should be viewed as part and parcel of the political behavior literature. Where it differs from the conventional political behavior literature is in the variables included. Individuals' positions on two issue dimensions—left–right materialism and post-materialism—are added to the more conventional social and demographic variables. Positions on these two issue dimensions are obtained from the EuroBarometer 16 (administered in 1981).[33] Discriminant analysis than reveals the dimensions that best discriminate between the groups of individuals that vote for a given party, which are linear combinations of the issue dimensions, sociological, and demographic variables. Knutsen describes this approach as identifying what Budge and Farlie (1978) call a 'mixed-input' instead of a 'policy-defined' voter space. Others have approached the same variable similarly. Moreno (1999) essentially goes on to use Knutsen's approach for a broader sample of countries, as do Evans and Whitefield (1998) for the Czech Republic and Slovakia, although the latter do not include social and demographic variables. In this thesis, however, the variable of politicized preferences is not tied to the party preferences of individuals, nor does it incorporate

[31] No mention is made of separate nation-by-nation analyses of the public opinion data although mention is made of separate analyses of the candidate data. If he did perform such analyses and the individual results were similar to pooled results, a (limited) cross-national data set operationalizing political cleavages would exist, albeit one without variance.

[32] This can be contrasted to the approach of the Manifesto Research Group, who confronted similar issues when approaching the particized preference variable. Their ultimate goal was to compare party movements (convergence or divergence) over time along a generalized left–right dimension. However, as Budge and Robertson (1987, 391) write, "...we made an undertaking not to take the general comparability of data across countries for granted, but to ascertain first, through the results of the separate country studies, whether a real basis of comparison existed." That is, they first investigated the country-specific party policy spaces in which competition occurred to see if such a cross-national comparison was reasonable.

[33] Theoretically guided factor analysis is used to confirm the existence of the two underlying dimensions. In other words, the EuroBarometer variables in the factor analysis are the questions that are believed to reflect the two dimensions.

ascriptive features of individuals. Again, something different from the concept of interest to this thesis is being measured by these analyses.

The dearth of cross-national data on this variable persists despite the development of new survey instruments such as CSES and calls for its use (e.g., Jones 1999). CSES, the Comparative Study of Electoral Systems, is a new cross-national collaboration amongst national election studies in over fifty countries. A common module of public opinion questions is included in the national post-election surveys of the participating countries. However, despite the ostensible focus of the first (1996–2001) of its two rounds on the "nature of political and social cleavages and alignments" (`http://www.umich.edu/~cses/about.htm`), the development of questions relevant to operationalizing the politicized cleavages variable—the issue-related opinion questions mentioned above—is left to the individual collaborators. In the second round (2001–2006), a limited number of socio-demographic questions are included in the common module but as before the questions relevant to operationalizing politicized cleavages are left to the individual collaborators.[34] Survey incomparability issues and the outright lack of relevant data seem likely to reduce the usefulness of this new instrument. Indeed, an examination of the bibliography compiled by the CSES of papers and publications that utilize CSES data does not reveal new sources of cross-national data on politicized cleavages.

In closing, it is worth mentioning another impediment to developing the cross-sectional time-series data sought by this thesis: the limited time series provided by the World Values and EuroBarometer Surveys. The former was first conducted in 1981 and the latter in 1973, so an analysis of variation in politicized preferences over the entire post-war period is out of reach using any operationalization based on these surveys.

2.2.3 Particized Cleavages

Scholars interested in coalition theory have primarily driven the operationalization of the particized preferences variable. Contra Riker (1962), they seek to incorporate policy concerns into analyses of the government formation process, which has "encouraged spatial representations of the coalition process [with which] each party could be represented by its preferred policy on one or more policy dimensions" (Budge and Laver 1993, 501). Research has consequently focused on identifying the dimensions or cleavages underlying political competition, the nature and number of which generally correspond to the definition of particized cleavages used by this thesis,[35] as well as the positions taken by parties in the resulting N-dimensional space (Grofman 1982), which is not relevant here.

The earliest quantitative operationalizations of this variable rely upon expert surveys. Morgan (1976) asked country specialists to place the parties competing in their country on up to three policy scales. The proportion of specialists who nominated a particular dimension as the 'primary scale' provides evidence as to the salience of a particular dimension and the overall number of dimensions in a polity. For example, 18% of respondents cited the

[34] One exception to this statement is the inclusion of the following question in the CSES micro questionnaire (CSES 2003): "What do you think has been the most important issue facing [country] over the last [number of years that the last government was in office] years?" The bibliography did not appear to contain analyses that made use of this question, though.

[35] Some implicitly view these dimensions as ideological. Others adopt the classical issue-based view that does not correspond to the position taken by this thesis. In the greater scheme of things, though, this is a minor difference.

religious dimension as the primary scale in Belgium, 64% the left–right dimension, 33% the cultural–linguistic dimension, and 5% 'other', suggesting that Belgium has three particized cleavages. Compare this to Denmark, where 95% of specialists cited the left–right dimension as the primary scale and 6% the center–periphery, suggesting that Denmark has only one particized cleavage.[36] Somewhat similarly, Laver and Hunt (1992) asked experts to assess the salience of 8 policy issues in their country to party leaders and to place party leaders along these issue dimensions; 24 primarily West European countries were the subject of the study.[37] However, expert surveys where the cleavage structure itself is freely elicited have only been conducted for a small number of polities, all of which are advanced industrial (e.g., Morgan's study).[38] Further, most ask experts to judge the salience of a cleavage either over a long time period, e.g. 1945–73 for Morgan's study, or for an indeterminate period (Budge 2000). Although nothing precludes future surveys from asking about specific and shorter periods, as matters stand, most studies, like Morgan's, either are or should be viewed as operationalizations of a long-run definition.[39] Warwick 2002 performed a principal components analysis on the positions of parties on issue (policy) dimensions derived

[36]The preceding discussion follows the excellent overview of Morgan's and other expert surveys in Laver and Shofield (1991, Appendix B).

[37]The 8 policy dimensions were taxes versus public services; foreign policy towards the USSR; public ownership; permissiveness towards homosexuality and abortion; religion; urban versus rural interests; centralization of decision-making; and environmentalism. Clearly, at least two of these (public ownership and taxes versus public services) relate to conventional understandings of the left–right dimension.

[38]The expert survey of Castles and Mair (1984) only asked country specialists to place parties on a left–right dimension. This study does not provide information about the cleavage structure. By presuming a common space in which party competition occurs (one-dimensional left–right), cross-national differences in the space cannot be empirically derived. While respondents in the Laver and Hunt survey could indicate the relevant salience of the 8 policy issues deemed a priori important in their polity and thus provide information about the dimensionality of the issue space, the use of such a limited set of issues must be deemed a drawback. So too must the use of issues instead of ideological dimensions. Experts were allowed to suggest additional policy issues and some took advantage of this. However, one cannot help but think that the particular issues related to underlying ideological dimensions may have driven results, as might have the omission of issues related to other dimensions. Huber and Inglehart (1995) focused primarily on the left–right dimension but constructed a somewhat open-ended survey that allowed for some cross-national differences to be elicited, although not enough for the purposes of this thesis. 42 countries were surveyed in all. They asked country specialists if the left–right dimension was currently the most important dimension of political conflict in their country. Eighty percent of the respondents agreed that it was. The only country where a majority of respondents suggested an alternative dimension was S. Korea, where a progressive–conservative dimension was preferred; this dimension, in fact, was the most widely used alternative primary dimension of conflict (81), which would be viewed by many comparativists as a near cousin of the traditional left–right dimension. Huber and Inglehart also asked experts if there was a second dimension of political conflict in their country, and if so, to identify it. Only 40% of respondents identified a secondary dimension of conflict and of these respondents, few agreed about the nature of the secondary dimension (82). Only in four countries did more than 1/3 of the respondents agree about the nature of the second dimension: in Norway, it was pro- vs. anti-EU; in Sweden and Switzerland, economic growth vs. environment; and in India, secularism vs. religion/fundamentalism. Huber and Inglehart compared these results to Morgan's and found them similar. However, unlike Morgan, they did not report the country-specific responses, except for the four countries noted here, which were discussed in the text of the article. Huber and Inglehart also note how the underlying meaning of left and right varies across countries, from traditional notions of economic conflict to (primarily in new democracies) authoritarian versus democratic forces.

[39]Castles and Mair (1984) and Huber and Inglehart (1995) did ask experts to place parties at a fixed time point, 1982 and "today" (i.e., when the survey was conducted—1995), respectively, which illustrates how a short-run operationalization using expert surveys might work. However, the actual time period used by experts to make their judgments is unclear, regardless of the survey's question wording (Budge 2000).

from expert surveys in 16 Western European countries, in this case the eight dimensions from Laver and Hunt 1992. He found that three components explained most of the variance in party positions, which he interpreted as the left–right, social control, and materialist–postmaterialist dimensions. Overall, despite the attractiveness of expert surveys, it is hard to refute Budge's (2000) criticism that it is unclear what expert surveys are actually measuring: party preferences versus behavior, a specific versus an extended time period, the preferences of leaders versus members versus voters, etc.

Inspired by the latter and other investigations such as Taylor and Laver (1973) and Dodd (1976) into the policy dimensions relevant to coalition formation,[40] the empirical expert judgment approach promoted by Lijphart (1990*b*, 1984, 1999) measures the salience of a variety of types of cleavages by impressionistically coding each as of high, medium, or low salience. The data supporting the coding decisions is the analyst's knowledge of the countries. These cleavages include socio-economics; religion; culture–ethnicity; urban–rural; regime support; foreign policy; and post-materialism. Cleavages of high salience are assigned a value of 1 and cleavages of medium salience a value of 0.5; if the salience of a cleavage varied over the post-war period, it is assigned a value of 0.5. An index of the number of 'issue dimensions' for each country is constructed by calculating the sum of these values. This approach is the only operationalization used in the party and electoral systems literature by scholars who incorporate a particized cleavage variable in their models. It clearly operationalizes a long-run, non-sociological definition of particized preferences, not a short-run, sociological one.[41]

The Manifesto Research Group's and Comparative Manifesto Project's[42] content analyses of post-war political party platforms in 25 advanced industrial democracies were developed with the goal of systematically estimating the policy preferences of political parties and their change over time without relying on expert judgments. They provide a rich source of empirical data for identifying particized cleavages.

A first approach that uses this data performs two-stage factor analysis[43] on the saliency (percent of sentences in an election programme) of 54 categories in the 7 subject area domains (foreign affairs; freedom and democracy; government; economy; welfare; fabric of society; and social groups). Unfortunately, the published factor analyses of the issue dimensions underpinning competition in each polity average over time, generally yielding a four- or five-dimensional space for each polity (Budge 1987, Budge and Robertson 1987). This

[40] These studies derived the dimensions of competition and the placement (usually ordering) of parties on the dimensions from expert judgments. In Taylor and Laver (1973), de Swaan (1973), and Dodd (1976), the authors compile information from secondary sources. The dimensions identified by Taylor and Laver and Dodd resemble Lijphart's (1990*b*) closely, while de Swaan only places parties on a left–right socioeconomic scale. In Browne and Drijmanis (1982), a country specialist offered the best (in his or her judgment) two-dimensional representation of the policy space. See Laver and Shofield (1991, Appendix B) for a good overview of this literature.

[41] The definition of the concept being operationalized is revealed implicitly by its operationalization. An issue dimension is considered highly or moderately salient if it divides political parties; the issue dimensions considered are not all rooted in sociological traits; and the level of salience reflects the salience over the entire post-war period (Lijphart 1999, 78–79).

[42] The Comparative Manifesto Project is the successor to the Manifesto Research Group. The former took over from the latter in the early 1990s.

[43] Choice of this procedure, to first identify dimensions within domains, was largely driven by the need to reduce the number of variables given the practical constraint of the small number of observations. Different strategies were sometimes employed in the country-specific analyses published in the chapters of Budge, Robertson and Hearl (1987).

approach is almost a necessary consequence of the small number of observations generated when the unit of analysis is a party[44] in an election year for a particular country. The total number of issue dimensions identified is consequently not a useful operationalization of the variable when the dependent variable is election-specific.[45] Further, the published number and nature of the issue dimensions (Budge, Robertson and Hearl 1987) identified from the two-stage factor analyses only cover 18 largely advanced industrial polities ('largely' because Sri Lanka and Israel are included in addition to the usual OECD suspects). A more serious problem is that many of the dimensions produced are not readily interpretable. Similarly, Warwick (2002) performed an exploratory principal components analysis on all 56 variables (coding categories) in the Comparative Manifesto Project's 1997 data, rejecting the above two-stage approach. While he notes that this data does not yield large principal components (for whatever reason, the issues in the data set are not highly correlated), the first three principal components seem to correspond to the three dimensions he identified using the Laver and Hunt (1992) expert survey data, although here,too, there are difficulties with interpretability. He concludes that three dimensions characterize West European politics. This analysis also averages over time. More importantly, unlike the prior analysis, it does not identify cross-national differences in the ideological space; rather, it identifies an ideological space common to the countries included in the analysis.

A second approach uses this same data to construct indices without sole recourse to factor analysis. First, a number of dimensions are selected from the Manifesto Research Group's coding categories. These dimensions are assumed to define the particized issue (or policy) space. Sometimes the set is obtained by grouping together the categories that data reduction techniques reveal tend to load on the same dimension. Second, party positions on these dimensions are then computed. For example, Budge and Laver (1992) perform exploratory factor analysis to identify issues that consistently loaded together in several countries; by combining these issues, they arrive at twenty new policy issues such as 'capitalist economics' and 'social conservatism' that they take to define a twenty-dimensional policy space. They also estimate a one- dimensional, left–right policy space, constructing a measure of left–right party positions by subtracting the coding categories identified as 'leftist' through a combination of theory and exploratory factor analysis from the 'rightist' ones. An important feature of their study is that the initial exploratory factor analyses were conducted on a country-by-country basis with the goal—and eventual result—of identifying two common dimensions across countries, left–right and what they call 'new politics'. In contrast, Budge and Laver (1993) simply select twenty policy coding categories ranging from state intervention to capitalist economics to agriculture and farmers; interpret these categories as dimensions; and estimate party positions on each dimension by calculating the saliency of the category to the party (the percent of manifesto sentences devoted to it). They also represent the data in terms of a single left–right dimension.[46] Budge et al. (2001) report a similar left–right index and party positions on four constituent policy dimensions of the overall left–right scale: planning, market reliance, welfare, and peace. In closing,

[44]Only significant parties according to Sartori's (1976) criteria were included in the analysis.

[45]For example, while political competition in the Netherlands may be dominated by one or at most two issue dimensions at any one given time, the total number of dimensions to emerge from the factor analysis is larger (three), reflecting change over time (Dittrich 1987).

[46]Only the one or twenty (or greater) dimensional space generalized across the countries. However, since the goal here is not to generalize across countries but to explore cross-national differences in the issue space underpinning political competition, this thesis is not bound to employ one of these two representations.

it is worth emphasizing how the goal of this thesis diverges from that of the Manifesto Research Group and its successors, who explicitly aim for "...invariance of measure over time and space..." (Budge 2001, 77). All of the measures discussed in this and the prior paragraph with the exception of Budge, Robertson and Hearl (1987) identify cross-national commonalities in the issue or ideological space, not cross-national differences.

A third and final approach based on this data is very new. It takes the first step towards a cross-sectional time-series measure of particized cleavages, which this thesis naturally applauds. Nyblade (2004) calculates the effective number of issues dimensions, N, for each Western European country (17 in total) and election in the Comparative Manifestos Project data set. The issues (coding categories) are weighted by their similarity[47] as well as their salience. Additionally, in each country–election, the contribution of a party's manifesto to the overall issue salience is weighed by the party's vote share.[48] This measure goes a long way towards providing a quantitative measure of the dimensionality of the ideological space in which parties are situated. However, a few problems with the approach deserve attention. First, as Nyblade notes, the identity of the dimensions cannot be obtained using this procedure. Since one of the goals of the thesis is to identify the nature as well as the number of political conflicts in a variety of societies, this is a significant drawback. Second, the variable is only operationalized for West European countries. While this can easily be remedied (other countries are included in the Comparative Manifestos Project data set), it does impede the use of the data. Third, particular choices made by Nyblade such as weighting parties by their vote share, employing the effective number (N) as the summary measure, and the use of angular separation similarity scores are not obviously good ones. Particularly problematic is the use of N to weight the various dimensions by salience, which tends to over-count the most salient dimension (Molinar 1991). For example, Sweden has the smallest average (over time) effective number of issue dimensions according to this method: 2.46(Nyblade 2004, 26). This does not correspond to our intuition that competition may be close to one-dimensional in some countries and time periods. Nyblade's measure shows competition that is always two-to four-dimensional. Relatedly, there is not as much cross-national variance as one might expect. In general, his approach is essentially data-driven, comparable in spirit to exploratory factor analysis. One cannot help but wonder if a simpler, index-driven approach combining theoretical beliefs about the likely content of the ideological space with past empirical work about the specific issues likely to be associated

[47] Angular similarity scores calculated over the entire data set—that is, over all countries and elections—are used instead of standard correlation coefficients in order to provide a score between 0 and 1. As Nyblade acknowledges, the calculation of the similarity scores using the entire data set when the goal is to explore cross-national differences is potentially problematic.

[48] The advisability of this procedure must be questioned. First, the Manifesto Research Group and Comparative Manifestos Project have already screened out small parties. Only those that satisfy Sartori's (1976) coalition or blackmail potential are included. Further down-weighting parties' contributions by their vote share seems to unduly privilege the issues emphasized by large parties. Whether because entrepreneurial parties introducing new issues (and potentially dimensions) take time to build a following or because a minority segment of society assigns different degrees of salience to different issues (and potentially dimensions), the fact that the parties promoting a particular set of issues attract less votes than others does not mean that their contribution to the issue (or ideological) space's dimensionality should be discounted. In fact, these circumstances may be a sign of a persistent and virulent cleavage in a society. To be clear, this argument applies somewhat fuzzily to parties that are not marginal, within reason, but all of the parties included in the Comparative Manifestos Project's analysis should satisfy this criterion. Second and more importantly, weighing party contributions by their vote shares conflates the voter and party spaces. One of the goals of the thesis is to see if the two spaces differ, which this procedure impedes.

with a given ideological dimension could not do just as reasonable of a job, in a more straightforward manner. It would be nice to have a measure that could be checked more extensively against our understanding of politics.

Leaving aside the Comparative Manifestos Project data for the time being, an alternative approach to operationalizing the particized cleavage variable follows the strategy described in the prior sub-section to operationalize the political preference variable: factor or principal components analysis of political elite survey data. The political elites are usually legislative candidates, as in Jackman (1998) and Inglehart (1984); in other operationalizations, they constitute a broader collection of individuals, from parliamentarians to officials and activists, as in Iversen (1994). As before, many studies of this type are analyses of particular cases and time periods, such as 1996 Australia in Jackman (1998). Others, such as Inglehart (1984) and Iversen (1994), are still analyses of particular time periods but do cover more than one case, although the cases are once again restricted to European or advanced industrial polities. In one of these studies, Inglehart (1984) performs a factor analysis on a survey of a sample of candidates running for seats in the European Parliament, which yields a similar number and nature of dimensions to that obtained from a factor analysis of the public opinion data. In his discussion of these results, he remarks, "... only the results from a pooled sample... are shown here; separate nation-by-nation analyses show essentially the same patterns, with minor variations" (35). Similarly, Iversen (1994) performs a factor analysis on the European Political Party Middle Level Elite (EPPMLE) survey of delegates to the party conferences of 56 parties in 11 West European polities in 1979, although analysis is limited to 7 countries.[49] Iversen finds two distinct dimensions underlying elite opinion, one corresponding to traditional economic issues and one to post-materialist issues. However, both data sets show no significant cross-national variance, which is greatly at odds with conventional understanding. It may in fact be the case that there is no variance in particized preferences for these polities; before drawing such a conclusion, though, one might well question this measure's validity, an issue that the next section will take up. Previous comments about the scope of the cases in Inglehart (1984) apply here as well.

A final operationalization is suggested but not actually implemented by Zielinski (2002). He notes that roll-call votes in successive parliaments can be used to compute NOMINATE scores (Poole and Rosenthal 1997), which in turn can be used to estimate the number of dimensions of political conflict. However, while roll-call vote analysis has a long history in the U.S., its application elsewhere has been limited for a variety of practical and theoretical reasons. Data sets on roll call votes where they exist have not been comprehensively collected across countries and even where roll calls are conducted, the information they carry in parliamentary systems that are not candidate-centered (i.e., with high party discipline) is unclear.

2.3 Assessing Validity and Reliability

A question that one might naturally ask following this review of existing operationalizations of the three preference variables is: are the measures valid and reliable? In fact, this section will make the case that many fail to attain validity. In discussing measure validity, both

[49]This survey is similar to the EuroBarometer. In fact, Iversen compared mass responses to a subset of EuroBarometer questions with candidate responses to comparable questions from the EPPMLE survey.

general difficulties with operationalizing some definitions and disjunctures between specific empirical operationalizations and theoretical definitions will be highlighted. The reliability of the measures will be the final topic of the section.

2.3.1 Validity

Validity refers to nothing other than "measuring what we think we are measuring" (King, Keohane and Verba 1994, 25). Do the measures of latent, political, and particized cleavages discussed above actually measure latent, political, and particized cleavages as defined by this thesis? The answer, sadly enough, is that many do not. Problems of validity are most acute for the measures of latent cleavages, which may ultimately be intractable by the very nature of the concept that we seek to measure. The discussion begins with measures of latent cleavages and concludes with measures of particized cleavages, mimicking the process of issue evolution.

It is very difficult to measure what this thesis has defined as latent preferences. Recall that a latent cleavage is defined as a potential politicized or particized cleavage. The set of latent cleavages contains all criteria that have positive probability of being politicized or particized. The identification of such a set entails estimating this probability for every conceivable criterion that might divide a community. The problem is that there are infinitely many such criteria: individuals can be divided by criteria ranging from their favorite color to their shoe size to their taste in alcohol to their desire to engage in trade with other countries, *ad nauseam*. Further, we will frequently have difficulty measuring the probability that a given cleavage will be politicized (e.g., the country's homogeneity with respect to a sociological cleavage). For example, take the latent cleavage of eye color. Without any historical knowledge of political conflicts related to this cleavage, we have no idea how to define the groups that will determine the country's homogeneity: homogeneity could be attained if there are no blue- or green-eyed persons (i.e., all brownish-eyed persons view themselves as similar); alternatively, dark brown-eyed individuals might array themselves against the light brown- and hazel-eyed. In other words, we cannot even define the population of all potential cleavages, let alone the population of the potential groups generated by these cleavages.[50] Should each country, then, be assigned a value of infinity? This is clearly a nonsensical strategy, even though it highlights the fact that any conceivable division that we can imagine—and even some that we cannot—may be seized upon by entrepreneurs and politicized. The possibilities really are endless.

An alternative strategy is to evaluate the probability of politicization or particization only for either inductively- or deductively-derived relevant criteria. An inductive strategy would consider a set of historically important cleavages, where 'historically important' is assessed across space and time and is defined as criteria that have been politicized in the past.[51] For example, if history tells us that class (occupation, not status) has sometimes

[50] In fact, Fearon (2002, 8–9) goes so far as to argue that his list of ethnic groups and their sizes cannot be used "to ask empirically why some possible ethnic groups become actual ethnic groups at a given time, or why ethnic as opposed to other political cleavages develop... [because] we do not have a sample of all hypothetically possible ethnic (or other) groups... Since it is not clear that the population of 'all possible ethnic groups in a country' is well-defined, even in theory, some sort of case-control approach would be necessary."

[51] We might want to assess importance via a running window: e.g., for a time point in the 1970s, assess the potential for political conflict along the cleavages that were important between 1945 and 1969; for a time

divided individuals into politicized groups, we might want to assess a polity's homogeneity with respect to this criterion. However, as either the rules underlying the strategic calculations of elites or the world changes (or both), so too will the ability of historically important latent cleavages to predict future lines of political conflict. Latent divisions around immigration, the use of nuclear power, and aboriginal rights, for example, only came to our attention when they were politicized although they had always existed as potential criteria for mobilization. If scholars such as Inglehart or Kitschelt are to be believed, their politicization and the declining relevance of the traditional historically important cleavages have followed changes in the structure of society such as post-war prosperity and the growth of the service sector. In this vein, certain sociological cleavages such as race, religion, class, and language seem to be both frequently and enduringly politicized relative to non-sociological cleavages such as colonialism (Bartolini 2000). Thus, this strategy will yield a better measure of sociological than non-sociological latent cleavages, which is no doubt why many scholars either implicitly or explicitly turn to a sociological definition. Adding deductive elements to this strategy would entail also assessing the potential for conflict along cleavages that have not been historically important but that scholars nevertheless believe are relevant. One key point about this strategy is that it assumes the set of relevant cleavages is constant across a subset of space and time, an assumption that may be more or less tenable for a given application. The other is that the analyst's judgment is certain to significantly shape results; sensitivity analyses should be performed and, whenever possible, deference paid to existing scholarly opinions about what the relevant set of cleavages should look like. Note that by relying on relevant cleavages, however defined, the latent cleavage variable underestimates the true potential for political conflict.

The issue then confronting the analyst is how to go about actually measuring the polity's homogeneity with respect to a relevant cleavage (or, for non-sociological cleavages, the potential for conflict as appropriately defined for a particular cleavage). That is, say we agree that religion has historically been an important cleavage and we want to measure the latent potential for religious conflict in a given society. How do we assess a polity's religious homogeneity? The problem is that if individuals can identify with a particular religious group, there is a good chance that the religious cleavage is no longer latent. Physical features of individuals such as skin color, gender, and left-handedness can arguably be viewed as independent of an individual's identification with corresponding groups and objectively measurable; accordingly, measuring homogeneity along latent cleavages such as race and gender might be possible.[52] However, many other sociological divisions are not objectively observable. For example, religion can usually only be identified through self-reporting and language is observable but a trait ultimately subject to individual choice. There is no easy way around the problem that non-objectively observable groups (e.g., ethnic, linguistic,

point in the 1990s, we might instead use the period 1965–1989. Alternatively, if we think that the set of important conflicts has remained reasonably stable over the post-war period, we can use the entire period. Chandra and Boulet (2003) and van der Veen and Laitin (2004) effectively adopt this approach although not in so many words, describing this set of cleavages as those that are salient or politically relevant, respectively. For both these studies, the selection process of what this thesis has called 'historically important' or relevant cleavages is exogenous to the models.

[52]Even the view of race as an exogenously generated independent variable that affects politics is increasingly subject to challenge. Smith (2004, 45) argues that "political scientists... have thought of races as created beyond the bounds of politics precisely because those notions have served to legitimate what were in fact always profoundly political constructions of status and identity."

and religious groups) can only be measured by asking individuals with which group they identify,[53] either explicitly in the case of religion or implicitly in the case of language. One cannot but conclude that these groups are endogenous or politicized (Alesina et al. 2003, Fearon 2002), which contaminates the measure.

The consequences of this theoretical (and hence empirical) difficulty are serious. Chandra and Boulet (2003) issue a stinging rebuke to many literatures in political science on these grounds. They argue that theories that make ethnic or other sociological structures independent variables must explicitly grapple with their fluidity and potential endogeneity to the dependent variable of interest. Researchers ignore constructivist findings that exogenous (latent) social demography is a chimera at their own peril. This issue is explored in greater depth in later chapters.

But the saga does not end here: practical issues rear their ugly heads. The validity problem described in the prior paragraph is ultimately insurmountable. Nevertheless, a more moderate goal of assessing homogeneity along a non-objectively measurable sociological cleavage—whether latent or politicized—*is* theoretically obtainable. A survey conducted in every country of interest that asked individuals either to classify themselves or to simply list all relevant groups would do the job. Both of these questions must be open-ended. Unfortunately, however, such open-ended classificatory surveys do not exist, certainly not in a cross-national context[54] and often not even in the context of a single country. Classificatory data is instead usually assembled country-by-country using close-ended questions in a census or other study, where survey administrators or researchers supply in advance the set of groups to which individuals can belong. Here, the strategy outlined above for selecting a set of relevant cleavages—historically important ones—is also presumably applied: the list of groups from which individuals are allowed to select is a list of historically important groups for the country in question (i.e., those that have been politicized in the past or are deductively viewed as relevant).

While the theoretical limitations described earlier apply to the selection of relevant groups in this manner, there is an important additional, practical limitation. There are many different ways to list the groups to which individuals can belong at different levels of aggregation. For example, the religious diversity of countries will look very different at the aggregate (Christian, Muslim, Buddhist, etc.) and the doctrinal (Protestant, Catholic, Sunni, Shi'i, etc.) levels. That is, the significant religious groups in the Netherlands could be viewed as Christians and Muslims; as Protestants, Catholics, and Muslims; or as Catholics, Dutch Reformed (*Nederlandse Hervormde Kerk*), Reformed Dutch (*Gereformeerde Kerken in Nederland*), Evangelical Lutheran (*Evangelisch-Lutherse Kerk*), and Muslim.[55] If the groups that have been politicized in the past vary, particularly in the level of aggregation, it is unclear how to proceed. There is unfortunately no exogenously supplied list of groups to which an analyst can turn. The level that is used for classification may have profound implications for research. Accordingly, results should be checked for robustness to different classification schemes to ensure that the choice of schema does not favorably drive results

[53] Alternatively, as Fearon (2002) suggests, one could ask an individual of which groups most other people in the community would consider him or her a member. This may or may not resolve the problem.

[54] Fearon (2002) notes that such a survey does not exist with respect to ethnic groups and that he lacks the resources to carry it out. Consequently, he argues, the only option available to analysts is to rely upon existing lists of groups and secondary sources.

[55] The major Protestant denominations in the Netherlands decided to unite in 2004 after two to five hundred years of serious schism.

(Fearon 2002). Additionally, graded instead of nominal measures are more appropriate when the cleavage is not salient (Brady and Kaplan 2000), yet existing measures, e.g. the ethno-linguistic fractionalization index (ELF), are usually nominal.

Further, some cross-national aggregate data sets seem to use biased lists of 'relevant' groups across countries, a problem that seems particularly acute for existing cross-national lists of religious groups.[56] That is, similar inductive and deductive criteria are not applied to select the list of relevant groups for each country. In some, the list is an artifact of unconscious bias (critics such as Said might use the term 'orientalism') or limited data, not the sought-after list of relevant groups.

To elaborate, in the lists of groups that comprise the Alesina et al. (2003) data set,[57] religion is more disaggregated in advanced industrial relative to developing countries, producing higher relative religious fractionalization in the former than is probably warranted. For example, compare their data on the U.S., which disaggregates Christianity into seven groups (a combined 85% of the population), with Liberia, where Christianity (68% of the population) is not disaggregated, yielding fractionalization indices of 0.824 and 0.488, respectively. It may be the case that these are the relevant religious groups in the U.S. and Liberia. It may also be the case that other factors underlie the disparate levels of aggregation employed—that the secondary studies upon which this list is based exhibit a bias towards disaggregating advanced industrial relative to developing countries. For example, in advanced industrial polities, fewer political sensibilities may restrict data gathering; there may be more resources available to researchers to facilitate data gathering; and researchers, usually hailing from advanced industrial countries themselves, may be more attuned to fine-grained distinctions by personal experience. Similarly, a tendency to disaggregate Christianity may result in Christian but non-advanced industrial countries exhibiting higher-than-warranted religious fractionalization relative to non-Christian, developing countries. For example, compare Alesina et al.'s data on Brazil, which disaggregates Christianity into two groups (a combined 61% of the population), with Indonesia, which does not disaggregate Islam (87% of the population), and India, which does not disaggregate Hinduism (82% of the population), yielding fractionalization indices of 0.605, 0.234 and 0.326, respectively. Again, the secondary sources upon which Alesina et al.'s list relies may exhibit a bias towards disaggregating Christianity relative to other religions. Perhaps many of the researchers who conducted the studies were themselves Christian and did not understand the religious fault lines of non-Western societies. Empirical studies utilizing measures based on this data that include developing and non-Christian countries as cases should be particularly cautious when interpreting results.

In short, operationalizing the latent cleavage variable is fraught with difficulties. It is in actuality almost impossible to validly measure exogenous determinants of preferences. A

[56] I do not agree with Alesina et al.'s (2003, 159) argument that "distinctions in this [religious fractionalization] data are perhaps less controversial and subject to arbitrary definitions than the data on linguistic and ethnic fractionalization, since the boundaries of religions are more clear and definitions consistent across countries." As Fearon (2002, 9) argues with respect to ethnic groups, "no plausible definition... will by itself imply a unique list of groups for a country." As with ethnic groups, there are often many plausible ways of listing the religious groups in a given country, which might influence the conclusions an analyst eventually draws.

[57] As noted in the previous section, I have not seen the list of groups and population shares used to generate either Fearon and Laitin's (2003*b*) or Annett's (2001) data sets. However, from an examination of the sources of each, the problems identified here are likely to also apply to their data.

healthy dose of skepticism is consequently warranted when one is confronted with conclusions drawn from empirical tests of hypotheses involving latent preferences.

Aside from these issues, are existing operationalizations a valid measure of the abstract concept of interest, latent preferences, as minimally defined earlier in the chapter? The most widespread empirical approach, which measures latent preferences along one cleavage such as religion or ethnicity, is invalid. Both elements of the minimal definition are not present in such an operationalization: it measures the number of groups generated by one criterion that divides the members of a polity, most frequently ethnicity, but does not consider others.[58] While ethnicity may be an important latent cleavage, it is not the only one. If one cleavage were to be picked as an overall proxy, two contenders would probably emerge—religion and socio-economics. Ethnicity has not been considered as important a cleavage in either the micro-level voting behavior (e.g., Lijphart 1971*a*) or macro-level party systems (e.g., Budge, Robertson and Hearl 1987) literatures. Similarly, despite the exclusive focus of existing operationalizations on latent sociological cleavages, these are not the only cleavages in the latent universe. Important latent non-sociological cleavages should be measured as well. In short, operationalizing latent preferences by only assessing potential politicization with respect to one criterion that divides a community ignores the bulk of a polity's cleavage structure.

An additive index represents a valid response to this criticism. However, it does not account for the possibility that certain cleavages may overlap, reducing diversity while increasing the salience of the overlapping cleavages. As Fearon (2002, 31) notes, "so far no cross-national data examines whether cross-cutting or overlapping cleavages between language/ethnicity and religion matter for dependent variables of interest." He posits that such a task is "relatively straightforward," but this assessment seems unduly optimistic. Country specialists would almost certainly be required to determine the extent to which lists of religious and ethnic groups overlapped. And even for the specialists, this would not be a straightforward task. For all intents and purposes, given the decision to not focus solely on cross-cutting cleavages for precisely these practical reasons, an additive or other composite index seems the best measure of latent preference diversity obtainable.

Similar criticisms apply to the existing cross-national measure of political cleavages, that developed by Moreno (1999), although for more subtle reasons. While factor analysis can result in a valid measure (all underlying structural components of mass opinion expressed in the survey are revealed), this validity is conditional on the survey instrument. The problem with the World Values and EuroBarometer Surveys, and hence any data on political cleavages derived from them, is that they are fundamentally designed to tap only two cleavages: the left–right (socioeconomic) and post-materialist cleavages. Other cleavages identified as important and discussed here, such as ethnic, religious, or foreign policy cleavages, are not adequately represented in the questionnaires and thus cannot be identified by factor analytic (or, for that matter, any other quantitative or qualitative) techniques.[59] The data resulting

[58]Ethnic fractionalization indexes typically measure slightly different things. For example, Fearon (2002) incorporates religion, language, and race into his definition of an ethnic group; *Atlas Narodov Mira* and *Narodi Mira*, to which Ordeshook and Shvetsova (1994) turn, primarily define ethnicity in terms of language. Thus, some operationalizations might tap multiple cleavages; however, even the most expansive such measure underestimates preference diversity by ignoring other historically relevant cleavages such as the worker–owner (left–right) cleavage.

[59]The questions in the surveys that are designed to tap ethnic, religious, class, and other such 'social cleavages' ask about socioeconomic traits such as an individual's gender. As the thesis has argued at length,

from individual case studies that rely on different surveys such as Jackman (1998) do not necessarily have the same validity problems, although their validity, too, is conditional upon the validity of the survey instrument used. The strategy that was discussed with respect to latent preferences should be applied here as well. To obtain minimal validity, the survey should ask questions related to a set of relevant cleavages. This set of relevant cleavages can be both inductively and deductively derived, but it should reflect scholarly consensus.

Beyond this general criticism of measures based on the World Values and EuroBarometer surveys that applies to Moreno (1999)'s operationalization of the political preferences variable suffers from a principal components factor analysis that is too theoretically constrained. Effectively, political preferences are not allowed to vary within each group of countries. Left–right materialism and postmaterial–fundamentalism are the two issue dimensions considered for *all* advanced industrial democracies, for example. The questions from the World Values Survey that are (theoretically) viewed as relating to these dimensions are the only variables included in the principal components factor analysis. Similarly, the set of possible issue dimensions is constrained over the whole sample: only six possible dimensions, many of which are region-specific variants of others, are considered. The result is a measure with very minimal cross-national variance. Of course, empirical analyses are rarely (and usually should not be) devoid of theory, as discussed at length above. On a spectrum with completely automated data mining algorithms at one extreme and theoretically-driven analyses that make no reference to data on the other, this type of analysis falls too close to the latter. In sum, the only existing cross-national data set on political cleavages is not a valid measure of the abstract concept of interest. Like the operationalizations of latent preferences that only tap one potential component of the cleavage structure, this operationalization of political cleavages neglects a significant number of important cleavages.

What about the existing operationalizations of the particized cleavage variable? The approach that conducts a factor analysis of political elite opinion data is subject to the same validity problems discussed above with respect to a factor analysis of public opinion data. None of the other approaches seem to suffer from noteworthy face invalidity. However, most rely upon the analyst selecting a relevant set of issues for consideration. Whether this set of relevant issues is inductively or deductively derived, or both, the perils—as highlighted earlier while reviewing existing operationalizations of the latent and political preferences variables—have hopefully been made clear to readers. As before, minimal validity requires analysts to choose a set of potential party-dividing criteria that reflects scholarly consensus. Expert survey approaches such as Morgan (1976) that explicitly elicit cleavage structures from a variety of specialists accomplish this, at least with respect to the scholarly consensus obtaining amongst the individuals and at the particular time surveyed. An inclusive sample of specialists will naturally do the best job of canvassing the range of scholarly opinion. One issue with the existing indices constructed from the Manifesto Research Group data is that the sets of relevant cleavages considered do not reflect scholarly consensus.[60] This is not surprising, because the indices were constructed with very particular applications

these questions will identify latent, not political, cleavages. Their inclusion alongside ideological and opinion questions illustrates the ties of this approach to the political behavior literature.

[60]For example, of the twenty 'cleavages' considered by Budge and Laver (1992, 1993), each of which corresponds to a coding category, several relate to the left–right socioeconomic cleavage. Elsewhere, these categories have been shown to load onto one underlying left–right dimension (e.g., Budge, Robertson and Hearl 1987). Other cleavages many scholars view as important such as ethnicity and religion are not considered.

(to coalition theory, for example) in mind. Similar indices for a different set of relevant cleavages can easily be constructed from the data, following the example set by existing studies and using the approach described in Budge et al. (2001).

Specific comments about several of the approaches are in order, beginning with the operationalizations that utilize the Manifesto Research Group data. First, the two-stage factor analysis approach weights each of the seven general subject area domains equally, which has substantive implications. As Budge (1987, 33) notes, "it means we ignore possible variations in importance between domains, and the possibility also that these occur between countries." Second, the data generated by the Group reflects the way political parties—specifically, the officials who draw up party manifestos—would like political competition to be structured. The particized cleavages that actually underpin political competition after (and even during) an election may be quite different once individual activists, interest groups, and representatives (parliamentarians) enter the equation. However, for all of the theoretical and practical reasons articulated in Budge (2001), it makes sense for the purposes of this thesis to allow parties to define the space via their most authoritative documents.

A cautionary note about Lijphart's (1984, 1990a, 1999) operationalization applies more broadly to the expert judgment approach in general. Both elements of the minimal definition of preferences are present in Lijphart's operationalization. The number of criteria that divide a polity (if not the number of groups generated by the criteria) is measured and a plethora of criteria are considered. In fact, this operationalization seems to validly measure the particized preferences variable as defined by this thesis in that it examines the issues that divide parties; weighs changes over time; and includes non-sociological cleavages such as foreign policy in the set of relevant cleavages considered. However, the absence of clear data generation procedures makes this supportive evaluation a tentative one. The opaque coding rules leave both Lijphart and the expert judgment approach as a whole vulnerable to charges of coding bias. That is, since the hypothesis in Lijphart's case is that the number of issue dimensions is positively correlated with the effective number of parties, the effective number of parties in a country (the value of the dependent variable) may have influenced his coding of the salience of the various issue dimensions (the value of the independent variable). For example, the socioeconomic issue dimension is coded as high salience for all countries save for the United States, the Bahamas, Canada, and Trinidad, with only minimal justification provided for these coding decisions.[61] The reduced salience of this issue dimension for these countries contributes to their ending up with a small index value. Perhaps not coincidentally, three of these countries have two party systems. Without further information about how these coding decisions were made, it is difficult to dismiss the possibility of bias out of hand. In general, then, the expert judgment approach may arrive at valid measures of the particized preferences variable. By the very nature of the fact that it relies upon the judgments of individuals, however, this validity is far from assured. Specifically, charges of bias cannot be easily dismissed.

Finally, in closing, all of the approaches operationalizing particized cleavages that do not

[61] The only justification provided follows. "Left–right differences... have generally declined since the 1960s but not to the extent that, over the period under consideration for each country, this issue dimension can be said to have disappeared in any of the countries or even moderated from 'high' to only 'medium' salience in most countries" (Lijphart 1999, 81–82). No specific information is shared with readers as to why the salience has moderated enough in these four countries alone to justify the socioeconomic cleavage being coded as of 'medium' salience for them and as of 'high' salience everywhere else.

use factor analysis—expert surveys, expert judgment, and indices constructed using Manifesto Research Group data—are unable to distinguish between orthogonal and overlapping cleavages. This again underscores the practical difficulty of operationalizing some interesting and compelling theoretical ideas. While factor analytic approaches are able to explore orthogonality, there is a cost. Either the measures average over time (e.g., the Manifesto Research Group's two-stage factor analysis), which operationalizes a long-run definition, or suffer from invalidity due to the use of survey instruments that fail to measure many—let alone all—relevant cleavages (e.g., Inglehart's factor analysis of political elite survey data).

2.3.2 Reliability

A reliable measure is one that "appl[ies] the same procedure in the same way [and]... always produce[s] the same measure" (King, Keohane and Verba 1994, 25). Reliability obviously requires that the data generation procedure is known. More specifically, it requires that it is known in detail, i.e. that there are explicit procedures for other analysts to follow.

Most of the operationalizations of the three preference variables described in this chapter are reliable for all reasonable intents and purposes. Existing operationalizations of latent preferences, for example, perform calculations upon data sets developed by third parties. The calculations are clearly reliable; taking the data sets themselves as exogenously given makes the measure as a whole reliable. Even the lists of groups and population shares that comprise the data sets probably do not do so badly on the reliability front. They are based on secondary sources that others can consult and many researchers such as Fearon (2002) have outlined their procedures as explicitly as possible in order to facilitate replication. Additionally, comparable data sets compiled by different researchers such as Alesina et al. (2003) and Fearon (2002), which have sources in common, serve as a natural check. Happily, as noted earlier in the chapter, the correlations between the different measures are high, suggesting measure reliability is not a serious problem for these operationalizations. Similarly, the factor analytic techniques for operationalizing political and particized cleavages as well as the indices constructed using the Manifesto Research Group data to operationalize the particized cleavages variable are all reliable. Given the theoretical structure imposed upon the factor analysis and the relevant data, for example, another analyst should be able to produce an identical measure.

However, reliability is far from assured for the measures of particized cleavages constructed using the expert judgment approach. Clear coding rules are not provided, which impedes replication. For example, Lijphart's (1999, 81) rule for assigning to an issue dimension one of three ordinal categorical values (low, medium, or high salience) in a country is described as follows: "A distinction is made between dimensions of high salience (H) and those of only medium intensity or those that varied between high and low intensity over time (M). The judgments... are necessarily subjective, but most are straightforward and uncontroversial." It would be surprising if other analysts made identical coding decisions as Lijphart given the lack of explicit procedures to be followed. In general, reliability is a serious problem for these measures precisely because they are inherently subjective. The advantage of the expert survey approach, which also relies upon expert judgments, is that biases and errors of individual specialists might (and hopefully will) balance out in the aggregate.

2.4 Conclusion

This chapter has attempted to define the abstract concepts with which this thesis is broadly concerned. Three types of preferences have been identified—latent, political, and particized—and distinctions made between long- and short-run as well as sociological and non-sociological variants of these types. The chapter has argued that setting the definitional record straight is more important than many scholars incorporating preferences into their research have recognized. Although scholars may of course define the abstract concept that interests them as they please, they must do so explicitly. Different abstract concepts and hence different definitions may be more or less appropriate—empirically and theoretically—in the context of particular research questions. Other researchers must be able to weigh in on these issues if social science is to be done. G. K. Chesterton would no doubt argue that this requires everyone to be on the same page, so to speak, with respect to what is and what is not being argued. Definitions, too often afterthoughts derived from particular operationalizations, must take their proper place on center stage.

Moreover, doing the social science advocated by this thesis requires empirical data with which to test hypotheses involving abstract concepts, however defined. In other words, the latent, political, and particized preference variables must be operationalized and data on a large sample of polities gathered. This chapter has also reviewed and evaluated the existent operationalizations of the three variables. A variety of operationalizations of the latent preferences variable can be culled from several literatures; however, almost all measure latent preferences solely with respect to one potential division of the community such as ethnicity or religion. Further, it is quite difficult to ensure that the measure is not contaminated, i.e. that it actually measures latent, not politicized, cleavages. Existing operationalizations, then, are not valid measures of the latent preferences variable defined by this thesis. New, better measures can and should be developed that tap a broader scope of potential divisions. However, this chapter has sought to put scholars on notice as to the ultimate intractability of this abstract concept to empirical measurement. With this in mind, scholars should use caution when drawing conclusions about hypotheses that incorporate latent preferences as a variable on either the left- or right-hand side.

Conversely, there is only one existent operationalization of the political preferences variable, although it too suffers from invalidity. The lack of cross-national data on this variable stems from cross-national survey instruments that do not ask the right questions, those necessary to identify the underlying political cleavage structure as defined by this thesis. Unfortunately, this empirical roadblock is not likely to be removed any time soon. Valid data can only be obtained by launching a new cross-national survey, an undertaking that would require massive amounts of both time and resources.

Finally, a variety of operationalizations of the particized preference variable have been identified. The expert judgment approach of Lijphart (1984, 1990a, 1999), which has generated the most widely used data set in the electoral and party systems literature, is certainly unreliable and therefore invalid. The Manifesto Research Group's party manifesto data has supported both factor analytic and simpler quantitative operationalizations. The former, unfortunately, averages over time and thus does not provide an operationalization of a short-run definition of particized preferences. The latter, while embracing a set of cleavages that is narrower in scope than is ideal, provides a useful benchmark for future work, which can easily extend the original set of cleavages considered.

In short, substantial work needs to be done before we can empirically assess how preferences vary across polities. Chapter 4 will attempt to make strides in this direction by proposing new measures of both latent and particized preferences. First, however, the thesis will review how preferences have been incorporated into the electoral and party systems literature, the topic of Chapter 3.

Chapter 3

From Preferences to Party Systems: Theory and Empirics

What is the relationship between political institutions, preferences, and party systems? Party systems influence many other aspects of politics in both established and newly emerging democracies. Accordingly, driven by the demands of theory and practice alike, political scientists in the comparative politics sub-field have sought to understand their determinants. An impressive amount of research energy has been devoted to both theory building and empirical analysis in the decades following the publication of Duverger's (1963) classic text that propelled the line of inquiry into prominence. The dependent variable of party system has been characterized both qualitatively and quantitatively. Various independent variables such as preferences and electoral systems have been identified. At the level of abstract concepts, existing theories explain cross-national and cross-temporal variance in party systems with the three variables of preferences, regime type, and electoral system, where the latter is by far the best understood.

Despite the importance of the preferences variable in the party and electoral systems literature, a brief survey of recent quantitative empirical research (post-1980) that attempts to account for cross-national variation in party systems reveals a seeming lack of consensus about how the variable should be operationalized and its relationship to other variables modeled. In fact, this variable is the most under-theorized and poorly operationalized in the literature.

For example, Lijphart (1990*b*, 1984, 1999) tests for a correlation between the number of issue dimensions and the effective number of legislative parties. Powell (1982) utilizes three measures of social heterogeneity in regression models for legislative fractionalization: ethnic fractionalization; an ordinal measure of the agricultural proportion of the population; and an ordinal measure of the Catholic proportion of the population. Taagepera and Grofman (1985), Taagepera and Shugart (1989), and Taagepera (1999) adopt Lijphart's perspective and utilize his data to develop and test their hypothesis that the number of parties equals the number of issues plus one. Ordeshook and Shvetsova (1994) model electoral systems as intervening structures through which the basic characteristics of society work to influence the number of political parties. Their independent variable is most broadly defined as social structure, which they operationalize as the effective number of ethnic groups. Cox (1997) returns to a more traditional definition of the variable, evidenced by his usage of the term 'social cleavages' and his equating of social structure with the number and type

of cleavages in society. However, empirically he (Cox 1997, Amorim Neto and Cox 1997) builds directly upon Ordeshook and Shvetsova's work, utilizing the same measure of effective number of ethnic groups in his cross-sectional regression models for the effective number of electoral parties. Demonstrating that scholarly work, like institutional development, is path dependent, almost all subsequent studies have 'hoed the same row' (e.g., Jones 1997*a*, Filippov, Ordeshook and Shvetsova 1999, Benoit 2002, Golder and Clark 2003, Chhibber and Kollman 2004).[1]

One exception is Jones (2004), who employs novel operationalizations of the social cleavage variable: a set of measures of ideological fractionalization. Another is Mozaffar, Scarritt and Galaich (2003), who add an additional variable—ethnic group territorial concentration—to the traditional effective number of ethnic groups measure. Other quantitative studies recognize the importance of this variable but fail to incorporate it into their models. Recent studies in this vein include Lijphart (1990*a*), Coppedge (1997), Chhibber and Kollman (1998), and Jones (1999). Qualitative studies such as Mainwaring and Scully (1995) are often similarly characterized by a poorly (and, across studies, variably) defined concept of preferences but their very nature makes the disagreement less noticeable.[2]

Recent empirical attempts such as these to integrate the institutionalist and sociological perspectives on party systems are to be applauded. However, scholars must ask why we observe such diverse modeling choices in the empirical party and electoral systems literature. The answer is two-fold. First, there is definitional disagreement, often implicit, about the variable of preferences, as Chapter 2 discussed. Second, the theory relating this variable to electoral and party systems is underdeveloped. Further, scholars must also ask about the consequences of this diversity along with the appropriateness of many of the modeling choices that have been made. A natural question that arises is whether or not hypotheses have been subjected to valid empirical tests. In other words, what do we in fact know about the relationship between preferences and party systems?

This chapter reviews and evaluates the existing theoretical and empirical electoral and party systems literature. It attempts to improve upon existing work by identifying the underlying sources of the diversity of modeling choices; formalizing the bias that results from both measurement error and the modeling of preferences as exogenous to electoral systems; assessing the sensitivity of existing results; and identifying potential theoretical and empirical targets for improvement. The chapter initially delves deeper into the theory that relates preferences to party systems. It identifies the different abstract and testable hypotheses that scholars have developed and discusses how they advance the research goals of the literature. It then turns to the empirical literature. It summarizes existing results and conclusions drawn; provides a methodological critique of the approaches employed; and assesses the sensitivity of results to different operationalizations of the preference diversity variable. The chapter ultimately argues that the methodological problems it identifies cast

[1]Several of these studies are interested in either testing hypotheses about independent variables other than cleavages, e.g. government centralization (Chhibber and Kollman 2004), or demonstrating methodological shortcomings of existing models, e.g. the failure to endogenize Duverger's psychological effect when modeling the mechanical effect (Benoit 2002). Accordingly, their 'hoeing the same row' with respect to the cleavages variable is good scientific practice, since it allows them to demonstrate their improvements on previous models. However, this in no way detracts from the argument that empirical work tends to adopt one of several very different approaches to this variable.

[2]While both qualitative and quantitative work can be scientific as King, Keohane and Verba (1994) have argued, quantification clearly signals the definition of an abstract concept employed by a researcher.

doubt on published empirical support for the hypothesis that both preferences and electoral systems influence the number of parties.

3.1 What Lies Beneath: Theory and Testable Hypotheses

A party system, the abstract concept of interest to be explained, is the parties in a polity and, most importantly, the patterns of interaction between them (Sartori 1976, Ware 1996, Broughton and Donovan 1998). A reasonable consensus has emerged in the comparative politics literature that the best way to define a party system is by the number of parties (Lijphart 1994). This definition captures the crucial distinction between two and multi-party systems as well as the general degree of party system fragmentation. It does, however, leave out information about some aspects of competition, such as whether competition is centripetal or centrifugal (Sartori 1976, Lijphart 1994) and the nature of the ideological conflicts about which political battles are waged. The quantitative operationalization most commonly used is Laakso and Taagepera's (1979) effective number of parties, which can be calculated with respect to either vote or seat shares to measure either the elective or legislative party systems, respectively.

Sustained scholarly effort has focused primarily upon two political institutional independent variables: electoral systems and regime type. The first systematic theoretical account linking electoral competition at the district and national levels was offered by Cox (1997) in one of the most influential comparative politics texts of the last decade. At the district level, he refined the Duvergerian argument and suggested that different electoral systems promote greater or lesser degrees of strategic coordination. In equilibrium, his '$M + 1$' rule predicts that the number of candidates or party labels will not exceed an upper bound equal to the district magnitude plus one. The micro-foundation of this district level relationship between electoral and party systems is the strategic behavior of voters (strategic voting) and elites (strategic entry). At the national level, Cox provided the missing link between Duvergerian district-level effects and national party system aggregation. The selection of the national executive, which confronts actors with another coordination problem, encourages the formation of cross-district strategic alliances.

What the literature has termed 'social cleavages', i.e., preferences in the parlance of this thesis, enter as a counterpoint to the institutional variables. They explain the number and types of candidates that compete in elections when there are no incentives for coordination provided by the electoral system and the need to select an executive.

From Lipset and Rokkan (1967) to Cox (1997), scholars in the electoral and party systems literature have theorized at the most general level that the more 'social cleavages' there are in a polity, the more political parties that polity will have. Lijphart expresses the general sentiment well: "when there are several dimensions of political conflict in a society, one would expect that a relatively large number of parties are needed to express all of these dimensions, unless they happen to coincide" (Lijphart 1999, 87). Similarly, Taagepera and Grofman (1985) argue that the effective number of parties equals the number of issue dimensions plus one. In other words, polities with similar degrees of preference diversity should have similar numbers of political parties, after—according to some—controlling for institutions such as the electoral system. The generation of political parties, in this simple view, is essentially demand-driven. The groups that comprise the cleavage structure of a polity will each demand that a party represent them and parties will be supplied to meet

these demands. Hence, the more groups along a given dimension or the more dimensions, the more parties. The resulting number of parties is what Cox (1997) has called a polity's 'natural number'.

The process by which groups demand and subsequently receive organizational representation by political parties is most developed by Cox (1997). Instead of the simple additive relationship sketched above, he argues for an interactive one. The informal model is as follows. Social actors face a coordination game with large penalties for failure under strong electoral systems. They may thus need to create factions or alliances with other social groups in this situation, reducing the number of parties demanded below the natural number according to the strategic imperatives for coordination. For example, he writes, "the correct understanding of the institutionalist model implies that the number of parties in a system ought to be an interactive function of electoral and social structure" (Cox 1997, 9). He elaborates on this thesis at the district level later in the text:

> "If we adopt the simple notion that the more cleavages there are in a society, the more parties it will have, but modify it by appeal to the institutionally imposed upper bound articulated by the $M+1$ rule, we should expect that the number of competitors, N, will be an interactive function of electoral and social structure: N will be low if either the electoral system is strong or social diversity is low; N will be high only if the electoral system is permissive and social diversity is high" (141-42).

Further, he goes on to argue, "just as at the district level, [so too at the national level] one might argue that a large number of separate parties will arise only if there is both social diversity and electoral proportionality" (193). This perspective, like the simpler additive one discussed in the prior paragraph, 'deals in' social forces (143) from the demand side.[3]

Nevertheless, even this account leaves many questions unanswered. First, what type of preferences generates the natural number of parties that electoral systems constrain given sufficient restrictiveness? That is, how is the independent variable defined? This is the first source of empirical diversity. Recall the previous chapter's discussion of the different positions that scholars have taken on three issues that comprise distinct conceptual dimensions of any definition of preferences: the nature of divisions, i.e. whether or not to confine the analysis to conflicts rooted in sociological traits; the persistence of divisions, i.e. whether or not to focus on long-standing conflicts; and the stage in issue evolution, i.e. which type of preferences—latent, political, or particized—to study. Different definitions of the abstract concept are employed in the literature. For Taagepera and Grofman (1985), preferences are defined as particized, non-sociological, and long-term divisions. For Cox (1997), the definition is latent, sociological, and long-term divisions, although this choice seems driven more by practicality—methodological concerns—than by theoretical conviction.

This leads naturally to the second source of empirical diversity: the hypotheses that link preferences to party systems. Some scholars hypothesize that greater latent preference diversity, i.e. more latent cleavages and/or groups generated by latent cleavages, is associated with greater numbers of candidates or party labels competing in elections; others put particized diversity on the right-hand side. Further, the type of hypothesized relationship also varies. Some argue that preferences is the sole independent variable (e.g., Taagepera and Grofman 1985); some that electoral system restrictiveness should be controlled for (e.g., Powell 1982); and others, like Cox, that preferences and the electoral system interact.

[3] Although not explicitly incorporated in his discussion of social cleavages, supply side arguments appear in other portions of Cox's book in the form of strategic entry.

But other questions remain. Should focus be on the groups generated by cleavages or upon the cleavages themselves? Again, scholars such as Taagepera and Grofman and Cox part ways on this issue. Moreover, given sufficient electoral system permissiveness, do we really think that the number of competitors is a positive and linear function of social diversity? One might think that the relationship is in fact nonlinear, as sufficiently diverse polities would experience pre-entry coalition building to produce minimally viable candidates. A host of other questions spring to mind. What is the model of elite and mass behavior underlying group demands for representation? Should social forces really be dealt in solely from the demand side or should the supply side be given a greater role to play? At which level are we concerned about the cleavage structure: the district (for district-level strategic electoral system effects) or the national (for cross-district party aggregation)? Where in the process do other variables, such as Cox's (1997) presidential party system and Chhibber and Kollman's (2004) government centralization, play a role? These theoretical questions need to be resolved before the predicted relationships can be satisfactorily subjected to empirical analysis and conclusions drawn about causality.

As this discussion reveals, the theoretical development of the relationship between preference diversity and party systems has not proceeded apace with that between institutions and party systems. As Jones (1999, 174) argues[4], "unfortunately, there exists little theoretical guidance as to how and why these factors influence the number of... candidates... [A] focus on institutional variables for which the hypotheses are supported by strong theory is very important..."

Despite these theoretical ambiguities, testable hypotheses have been developed. Three one-sided, additive hypotheses are suggested in light of the most important outstanding theoretical issue discussed briefly above and at length in the prior chapter: how preferences should be defined. They are:

- Hypothesis 1: An increase in latent preference diversity leads to an increase in the effective number of parties, *ceteris paribus*. In other words, the coefficient on the latent preferences variable is positive in a regression with this variable on the right-hand side and the effective number of parties on the left-hand side.

- Hypothesis 2: An increase in political preference diversity leads to an increase in the effective number of parties, *ceteris paribus*. In other words, the coefficient on the political preferences variable is positive in a regression with this variable on the right-hand side and the effective number of parties on the left-hand side.

- Hypothesis 3: An increase in particized preference diversity leads to an increase in the effective number of parties, *ceteris paribus*. In other words, the coefficient on the particized preferences variable is positive in a regression with this variable on the right-hand side and the effective number of parties on the left-hand side.

The null hypothesis implied by each of the above hypotheses is one-sided: that there is either no or a negative relationship between the independent preferences variable and the

[4]The initial portion of this quote actually refers to other non-institutional variables such as the degree of democratic consolidation. Jones recognizes that these variables probably affect electoral competition but is reluctant to include them in his models due to the underdevelopment of theory. However, Jones's skepticism regarding the validity and reliability of existing measures of social heterogeneity seems to extend to the strength of the theory incorporating this variable as well. Apologies are offered in advance for any misrepresentation of his views that results from the use of his words here.

dependent party system variable. These hypotheses embody very different theories about how preferences relate to party systems. For example, Cox (1997) tests a hypothesis of form 1 while Taagepera and Grofman (1985) test a hypothesis of form 3 in keeping with the theoretical positions staked out by each.

Additional testable hypotheses that posit a conditional relationship between the party system, electoral system and cleavage structure have been developed to empirically analyze the claims of influential scholars such as Cox. The most general is simply:

- Hypothesis 4a: The effect of an increase in latent preference diversity on the party system is conditional upon the strength of the electoral system. That is, the coefficient on the interaction term between the latent preferences and electoral system strength right-hand side variables is non-zero. The null hypothesis is two-sided: that the coefficient is zero. Alternatively and equivalently, the more complex model with an interaction term will yield a statistically significant improvement in fit over the less complex model without an interaction term.

Cox, following Ordeshook and Shvetsova (1994), seems to have had this hypothesis in mind based on the empirical model that he tests and his discussion of the results. A more specific hypothesis, which is implied but not formally stated by his theoretical account and fleshed out by Golder and Clark (2003), is:

- Hypothesis 4b: The marginal effect of latent preference diversity on the party system is expected to increase as electoral system permissiveness increases; hence, the coefficient on the interaction term is positive. The null hypothesis is one-sided: that the coefficient is either zero or negative.

Golder and Clark alone offer even more specific hypotheses:

- Hypothesis 4c: The marginal effect of latent preference diversity on the party system should be positive for sufficiently permissive electoral systems. The null hypothesis is one-sided: that the marginal effect is either zero or negative.

Although interactive models have mostly been developed with reference to latent preferences, the arguments seem to generalize to politicized and particized preferences. Accordingly, we could add two additional testable hypotheses that at minimum correspond to Hypothesis 4a above for the politicized and particized cleavage variables.

However, there remains ambiguity about the details of these hypotheses. It is not clear what Hypothesis 4c predicts for the marginal effect when electoral systems are strong: should the marginal effect be statistically indistinguishable from zero? What if it is negative and statistically significant? It seems that the latter should serve as evidence against the hypothesis, but the theoretical literature does not have much to say about the matter, other than a general predisposition towards viewing an increase in preference diversity as having either a positive or no effect upon the party system. It is also worth noting with Golder and Clark (2003) that what constitutes 'sufficiently permissive' is unclear. Following Cox (1997), we could draw the line quite comfortably at a median district magnitude of five and probably even lower (say, two or three).[5] Finally, what conclusions do we draw

[5]Cox (1997, 100) argues that strategic voting does not have much of an effect in district magnitudes above five because the informational assumptions that one must make about voters become unrealistic. Even elites, about whom stronger informational assumptions can generally be made, will have difficulty engaging in strategic coordination with district magnitudes much greater than five.

if the empirical evidence supports some of these testable hypotheses but not others, e.g. Hypothesis 4c but not Hypothesis 4b? That is, what if marginal effects are positive but decreasing in electoral system permissiveness? Such a finding would also seem to serve as evidence against the hypothesis. Without a return to the theoretical drawing board to resolve these issues, empirical testing may be inconclusive.

A final issue concerns the dependent variable. This is sometimes defined as the number of electoral parties (e.g., Cox 1997) in the literature's hypotheses and other times as the number of legislative parties (e.g., Taagepera and Grofman 1985). Both of these definitions are reasonable representations of the abstract concept of party system. However, only one definition is justifiable in light of the research goal of relating observed variance in party systems to observed variance in preference diversity. It is a truism in the vast electoral systems literature that only electoral laws govern the translation of votes into seats (Taagepera and Shugart 1989, Taagepera and Shugart 1993, Benoit 2002). Preference diversity has no direct effect on this process: its only effect is indirect. That is, preference diversity is hypothesized to affect the number of parties (or candidates) that contest elections and the subsequent distribution of votes for parties (or candidates), which together determine the effective number of electoral parties. Electoral systems then mechanically use this vote distribution to generate the distribution of seats, the effective number of legislative parties. The only defensible definition of the dependent variable given this theoretical consensus is the number of electoral (not legislative!) parties. Otherwise, structural modeling must be employed (Benoit 2002). In a later section, I will discuss the methodological consequences of empirically modeling the relationship between the independent variables of preference diversity and electoral system and the dependent variable of the number of legislative parties.

3.2 Research Goals

Before turning to summarizing the conclusions drawn from empirical research, a few comments about how well these different hypotheses further the literature's research goals are warranted. The phrase 'research goals' here refers to the literature's overarching theoretical concern—prediction versus causal explanation. Each of the above hypotheses has its strengths and weaknesses with respect to advancing these goals. As I discuss below, the first exogenizes preference diversity to allow predictive model building but pays a heavy price for doing so. The second and third hypotheses, conversely, can advance a causal argument but must grapple with the issue of endogeneity.

Hypotheses of form 1 are appealing for practical reasons: empirical modeling seems straightforward because latent cleavages are viewed, however incorrectly, as exogenous to electoral and party systems. However, such hypotheses are ultimately difficult to test because operationalizing the independent variable of latent cleavages so that it is truly exogenous is a problematic affair, as discussed in Chapter 2 and also addressed in a later section of the current chapter.[6] If a supposedly exogenous variable is not in fact exogenous, all bets are off.

[6]Chandra and Boulet (2003) forcefully argue that ethnic demography, for example, is *not* exogenous to the minimum winning threshold that electoral systems may be viewed as establishing. Laitin and Posner (2001) discuss the implications of constructivism for comparative political studies that employ ethnic fractionalization indices in quantitative analyses.

Another problem with the first hypothesis is precisely what makes it practically appealing: no one has yet articulated a direct theoretical relationship between latent cleavages and party systems. Why should groups that are not politicized—that is, groups that are not actually participating in political debates and, in fact, may be unaware of their groupness—have anything to do with the generation of parties? And why should aggregate (national) groups be the ones that matter, particularly when we are studying the strategic incentives provided by electoral systems at the *district* level? As Posner (2004) argues in the context of economic growth in Africa, existing ethnic fractionalization indices are fundamentally flawed in these respects. He, like this thesis, is skeptical that anyone will ever be able to overcome the "critical mismatch ... between the causal mechanism ... and the measure of diversity that is used to test that mechanism" (2–3) in general terms. The one area where it may be possible is for latent ethnic cleavages.[7] In general, though, many intervening processes on the causal chain separate these two variables. Presumably, the intended argument is that the more latent preference diversity there is in a polity, the more politicized (and hence particized?) preference diversity there will be, which will generate additional parties. Little evidence has thus far been marshaled in support of the former part of this claim. We do not know if latent diversity positively correlates with either politicized or particized diversity.

Further, the interesting part of the story is precisely what is glossed over by making latent preferences the independent variable. The 'meat' of the argument, so to speak, is the intervening steps or mechanism. In the absence of a mechanism that clearly links the independent and dependent variables, an observed empirical relationship only suggests association, not causality. Laitin (1995, 6) argues that "empirical relationships become powerful if they are part of a deductively driven 'story' which provides a rationale as to how and why the situation on the independent variable leads to specified outcomes on the dependent variable." No such story can be told here. Empirical models of this hypothesis may identify an association between latent cleavages and the effective number of electoral parties but we cannot be confident that this association has causal properties. If the research goal of the literature is to provide a causal explanation, this hypothesis does not advance it. However, if the goal is merely to describe or to predict, than this hypothesis can be of use.

The second and third hypotheses in both their additive and interactive formats have different problems. Both allow the pursuit of causal explanation. The mechanism linking the independent and dependent variables in each is usually not well specified. However, a deductive story about how the choices of actors under constraints lead to the observed outcomes can be synthesized from the literature. Telling this story, though, forces us to confront the potential endogeneity of these independent variables.[8] This endogeneity has been recognized by the theoretical literature, which suggests that both politicized and par-

[7] I refer here to the arguments advanced by Bates (1983) and extended by Fearon (1999) that when politics is distributive instead of ideological, strong incentives exist for political coalitions to form on ethnic lines.

[8] I do not endogenize electoral systems here. It is undoubtedly true that electoral systems are endogenous to party systems: that initial choice of and subsequent changes in electoral systems serve the interests of existing parties. However, as Lijphart (1994, 52) argues, "electoral systems... tend to be very stable and to resist change." I follow numerous others in viewing electoral systems as effectively exogenous in light of the observation that once electoral systems are in place, they act as exogenous constraints on elite and voter behavior.

ticized cleavages are endogenous to electoral systems. Specifically, electoral systems are hypothesized to interact with politicized cleavages to produce the particized cleavage structure.[9] Note that entrepreneurs who are influenced by macro-level variables such as electoral systems can shape both elements of the cleavage structure: the number and nature of the groups generated by the cleavages and the number and nature of the cleavages themselves. Significant theoretical ambiguity remains about this process, however, and its relationship to electoral coordination.

Nevertheless, even this underdeveloped theoretical literature poses problems for hypotheses of form 3, which posit a relationship between the effective number of electoral parties and particized cleavages, controlling for electoral system. Failing to recognize the endogeneity of particized cleavages by testing the hypothesis as it stands will result in biased estimates of the effect of electoral systems. Ultimately, this will lead to flawed conclusions about the causal process underlying electoral coordination, such as the relative importance of preference diversity and the electoral system. Decreased predictive power regarding the impact of changes in political institutions such as electoral systems will also result. Regardless of the research goals a scholar might have, either causal explanation or predictive model building, ignoring the endogeneity of partisan cleavages undermines those goals. The next section explicates the methodological consequences of testing Hypothesis 3 when particized cleavages are endogenous as discussed above. The literature does not provide us with specific hypotheses for the dependent variable of political cleavages. It does leave us with a sense that this variable, too, is endogenous to political institutions and a variety of contingent factors, though.

Another issue must be raised regarding hypotheses of form 3. Even if there is a causal relationship between the size of the particized issue space and the effective number of electoral parties, the two may be so closely related that knowing the former will not give us adequate leverage to explain observed cross-national and cross-time variation in the latter. In other words, we might ask how independent the two are: is the particized issue space really antecedent to and meaningfully distinguishable from the effective number of electoral parties? A rough-and-ready calculation of the correlation between Lijphart's (1999) number of issue dimensions and the effective number of elective parties is suspiciously high.[10] Essentially, there may be so little distance on the causal chain between the two variables that arguments like Lijphart's take on a tautological tone, although Taagepera and Grofman (1985) are correct to argue that they are not strictly tautological.[11] On the micro level, Budge and Farlie (1976) draw a similar conclusion regarding the independence of party identification and vote choice.

[9] See, for example, Cantillon (2001), Posner (N.d.), and Chandra and Boulet (2003), among others. Chapter 6 will address this topic at greater length.

[10] A rough estimate of the Pearson correlation coefficient using data from Lijphart (1999) yields $r = 0.80$. As Benoit (2002) demonstrates, the effective number of elective parties correlates closely with the effective number of legislative parties in equilibrium. Hence, a similar relationship is also evident from Lijphart's (1999) and Taagepera and Grofman's (1985) published statistics, which estimate an even higher correlation between particized cleavages and the average effective number of legislative parties.

[11] Taagepera and Grofman (1985) argue that the number of issue dimensions does not circularly emerge from the existing number of parties. Each issue dimension can support between two and infinitely many parties (depending on how the issue divides the electorate into groups). Further, a given number of parties can be explained by one issue dimension that supports several positions or by several issue dimensions that support few. But the fact that there is not a "rigid interconnection" between the two does not imply a truly meaningful causal relationship.

Hypothesis 3 thus might confront scholars with a very different problem from that posed by Hypothesis 1. Hypothesis 1 does not allow for causal explanation but will yield an empirical model whose predictive power can assessed using standard statistical practices. Hypothesis 3, in contrast, will allow for causal explanation. However, if the inductively-motivated argument raised here is valid, any predictive model estimated is likely to be of limited use in the same way in which knowing a person's vote intention five minutes before she enters the ballot booth is not helpful in predicting her ultimate vote. Scholars and policy-makers will probably need to make predictions more in advance of the event than this, in which case a different model must be constructed. Similarly, scholars who seek to understand the full causal process linking institutions and preferences to vote choice will need to look further back on the causal chain, where significant chapters of the story are told. That is, Hypothesis 3 might not significantly advance either a scholar's predictive or explanatory goals. Of course, it is also possible that these high correlations are sample dependent or due to coding bias: Lijphart's knowledge of the effective number of parties might have influenced his coding of the number of issue dimensions, the issues of reliability and validity discussed in Chapter 2.

3.3 So What Do We Know?

This section of the chapter turns to the empirical from the theoretical literature. Testable hypotheses were specified in the prior section. What, empirically speaking, do we know from existing quantitative studies about the relationship of latent, politicized, and particized cleavages to the party system? The fact of the matter is that in addition to the variety of approaches to the social cleavages variable adopted by quantitative work, the conclusions drawn about the relationship between this variable and party systems have also varied. Overall, most have argued that evidence supports the predicted positive effect of an increase in preference diversity on the party system. However, some hypotheses have not been tested and studies do not always draw similar conclusions about specific hypotheses.

The results of quantitative empirical research designed to test Hypothesis 1, 4a, 4b, and 4c are summarized below in Table 3.1. Conclusions about Hypothesis 4a vary but are generally supportive: the interaction term is statistically significant at conventional levels in most but not all models. The evidence also seems to support Hypothesis 4b, although the studies summarized below conduct a two- instead of a one-sided test. As far as Hypothesis 4c is concerned, it is only tested by Golder and Clark (2003), and then for only one of their models, although all of the studies that estimated interactive models could have tested it. Hence, the empirical support for this hypothesis, the crux of the abstract theory, is limited relative to that for the others. Finally, there is also reasonable support for Hypothesis 1. The interaction term is not significant in some models; the estimated coefficient on the latent cleavage variable is almost always positive in additive models; and there are some insignificant and some significant two-sided tests for this coefficient. However, again the one-sided test for this coefficient is not performed. In sum, then, when they are tested, most of the hypotheses with latent preference diversity on the right-hand side are suggestively supported by the data, even if statistical support is less forthcoming.

There are no quantitative tests of variants of Hypothesis 2. This is no doubt due to the lack of cross-national data on what the thesis has defined as political cleavages. A possible exception is the research by Mozaffar, Scarritt and Galaich (2003). If we accept Scarritt and

Study	Dependent Variables	Operationalization, Latent Preferences	Model Type(s)	Unit of Analysis	Cases	Results
Powell (1982)	Legislative fractionalization	Ethnic fractionalization; ordinal measures of % agricultural and % Catholic (one model)	Additive	Election, legislative and national	TSCS, 27 mostly advanced industrial polities, 1967–76	Positive and significant coefficient estimates on all three heterogeneity measures
Ordeshook and Shvetsova (1994)	Effective # of legislative & electoral parties; # of parties (separate models)	Effective # of ethnic (ELF), religious, & linguistic groups (separate models)	Both	Electoral regime–polity, legislative; election, legislative and national	TSCS, advanced industrial democracies, 1918–39, 1945–90	Positive and significant interaction terms; marginal effects not calculated; positive but insignificant coefficient estimates in additive models using ethnic and linguistic groups and negative using religious groups
Amorim Neto and Cox (1997); Cox (1997)	Effective # of electoral parties	Effective # of ethnic groups (ELF)	Both	Election, legislative and national	CS, mid-1980s, polities with 'free' FH score	Positive and significant interaction term; marginal effects not calculated; positive and significant effect in additive model; "similar results" with linguistic and religious groups
Jones (1997*a*)	Effective # of candidates	Effective # of racial groups	No electoral system variables	Election using majority runoff, district	TSCS, Lousiana House elections, 1975–95	Positive and significant effect of racial heterogeneity
Filippov, Ordeshook and Shvetsova (1999)	Effective # of parties; # of parties (separate models)	Effective # of ethnic groups (ELF)	Interactive	Election, legislative and national	TSCS, Central & East European polities, 1990–96	Positive and significant interaction term; marginal effects not calculated

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Table 3.1: Summary of quantitative tests of hypothesized relationships between latent cleavages and party systems.

continued from previous page

Study	Dependent Variables	Operationalization, Latent Preferences	Model Type(s)	Unit of Analysis	Cases	Results
Golder and Clark (2003)	Effective # of electoral parties	Effective # of ethnic groups (Fearon 2002)	Inter-active	Election, legislative and national	TSCS, 1946–2000, 199 polities; CSs from 1980s, 1990s	Interaction term significant in 1/2 of models, positive in all but one; marginal effects positive, increasing, and significant at all but small district magnitudes for one 'representative' model
Mozaffar, Scarritt and Galaich (2003)	Effective # of electoral & legislative parties (separate models)	Effective # of ethnic groups (several measures); ethnic concentration	Both	Election, legislative and national	TSCS, 1990s?, 34 African polities that democratized in the third wave	Three-way interaction term positive and significant; marginal effects not calculated; positive and significant interaction between fragmentation and concentration; in additive model, negative and significant effect of fragmentation, positive and insignificant effect of concentration
Jones (2004)	Effective # of presidential candidates	Effective # of ethnic groups (own data); various ideological fractionalization measures (separate models)	Both	Election, presiden-tial and national	2 CSs of recent elections drawn from a TSCS dataset, 1940–2001, max of 50 democracies using plurality or majority runoff	Interaction term positive in both and significant in one CS using ethnic heterogeneity and both positive and significant in both CSs using ideological fractionalization; in additive models, positive but not significant; purely institutional model is as good or better than models with cleavage variables; marginal effects not calculated

Table 3.1: continued.

Mozaffar's (1999) contention that their lists of ethnic groups measure politicized, not latent, groups, then cross-national data on political cleavages exists and a statistically significant and positive (at reasonable district magnitudes) relationship has been found. Even so, their operationalization only measures politicized ethnic groups, which is problematic for reasons discussed in the next section, and then only in African countries. This is nevertheless a promising approach if it can be extended to groups generated by other cleavages and to other cases.

Finally, what about Hypothesis 3 in all of its variants? Quantitative empirical tests of these hypotheses have been few and far between. Most have not moved beyond simple description and all use Lijphart's operationalization of issue dimensions as their particized cleavage variable. Lijphart (1999, 88) estimates the correlation coefficient between the number of issue dimensions and the average effective number of legislative parties over the period 1945–96 to be 0.84. That is, countries with many issue dimensions tend to have a larger effective number of electoral parties than do countries with few issue dimensions. Taagepera and Grofman (1985) estimate a regression model with issue dimensions on the right hand side and the effective number of legislative parties on the left hand side. Their data is from Lijphart (1984) and averages over the period 1945–80. This model is also reported in Taagepera and Shugart (1989). The estimated coefficient on the number of issue dimensions is 0.834 and the estimated intercept is 1.26. However, no standard errors are provided. Accordingly, this quantitative empirical work is more descriptive than inferential, despite these studies' estimation of a regression model. Both report what they call a "correlation coefficient" of 0.75; Taagepera and Shugart's (1989, 94) use of the notation R^2, however, suggests that this may be the coefficient of determination, which is the square of Pearson's correlation coefficient, r, in the bivariate case. Either way, there is a strong linear relationship between issue dimensions and the effective number of legislative parties, although if it is in fact the correlation coefficient, the relationship is somewhat weaker than if it is the coefficient of determination. Finally, Taagepera (1999) argues for the relationship

$$N = I^{0.6} M^{0.15} + 1 \ ,$$

where N is the effective number of legislative parties, M is the effective district magnitude, and I is the number of issue dimensions. He reports a correlation coefficient of 0.90 between actual and predicted values of the effective number of legislative parties. However, this study is a blend of theory and empirics that also seems more descriptive than inferential.[12] In sum, particized cleavages appear to be positively related to the electoral party system. Problems with the data as well as the empirical methods that scholars have used, however, make it unwise to use the results either for prediction or in support of a causal argument.

3.4 Methodological Critiques of Quantitative Studies

The lack of systematic theorizing in the party and electoral systems literature has led to a plethora of modeling choices for the abstract concept of preference diversity and its

[12] Taagepera (1999) essentially estimates a non-linear model without associating standard statistical models with his calculations. This ad hoc curve fitting raises a host of issues, statistical and otherwise—too many to delve into here or in later sections. In short, he treats the data as fixed instead of the realization of a stochastic process. His method does not use confidence intervals, standard errors, or other hallmarks of inferential statistics and there are no procedures for evaluating its statistical properties.

relationship to other variables. This section evaluates the methodological choices made by existing empirical research. A discussion of the methodological consequences of invalid operationalizations of the preference diversity variable is followed by a discussion of the methodological consequences of improperly specifying the relationship between variables. This includes putting the effective number of legislative parties on the left-hand side and ignoring the endogeneity of particized cleavages. Finally, other specification and estimation issues are briefly addressed.

3.4.1 Variable Operationalization

Many empirical researchers in this literature have been operationalization-driven instead of definition-driven. That is, the operationalization of the preferences variable seems to have often been chosen out of convenience instead of a belief that it reflects the abstract concept of interest. Even empirical researchers who do define their independent variable usually provide little justification for why their definition (and further, their operationalization) is to be preferred to others.[13] Choosing the operationalization of a variable is as important a step to empirical work as defining a variable is to theoretical work. Only when an operationalization accords with (i.e., validly measures) the variable as a researcher has defined it will meaningful empirical investigation of a hypothesis be possible. Although this is not the place for a philosophy of science debate about the relative merits of inductive versus deductive inference, greater attention to deductive theorizing amongst electoral and party systems scholars might lead to less empirical disarray and, ultimately, to better social scientific knowledge. The measuring without explicit reference to theoretical structure that has occurred in this literature can introduce substantial error (King, Keohane and Verba 1994, 153). The fact that preference diversity has largely been incorporated in hypotheses inductively, without careful theorizing about how operationalizations and definitions relate to the abstract phenomenon of interest, leaves comparativists vulnerable to a Type III error—giving the right answer to the wrong question (Kimball 1957).

Chapter 2 discussed the difficulties inherent in operationalizing the latent cleavage variable, one possible definition of preferences. These difficulties complicate testing hypotheses of form 1. The impossibility of developing a perfectly valid cross-sectional measure due to endogeneity concerns implies that conclusions drawn from empirical tests of models involving this independent variable must be viewed with a healthy dose of skepticism, regardless of how good any particular measure is. Further, the operationalizations actually used in these quantitative analyses are not in fact particularly good. The modeling approach developed by Ordeshook and Shvetsova (1994), which measures latent preferences solely with respect to one cleavage such as ethnicity, does not utilize a valid measure for all of the reasons explicated in Chapter 2.[14] Ordeshook and Shvetsova explicitly define their variable

[13] One prominent exception to this criticism is Ordeshook and Shvetsova (1994), who defend their definition of social diversity as long term, sociological and latent cleavages on the grounds of its exogeneity to the electoral system. However, they do not devote much space to arguing for a sociological definition, nor is their operationalization of this variable sufficiently justified. Another is Jones (1997*a*, 2004).

[14] As noted in a previous section of this chapter, all empirical work following Ordeshook and Shvetsova (1994) save for Jones (2004)—using left-right ideological fractionalization—and Mozaffar, Scarritt and Galaich (2003)—using a measure of ethnopolitical group concentration—has operationalized latent preference diversity as the effective number of ethnic groups. Additionally, *all* operationalizations except for Powell (1982) only tap one cleavage such as socioeconomics or ethnicity.

as *latent* cleavages[15] and implicitly (based on the three proposed operationalizations of the variable as ethnic, religious, and linguistic fractionalization) as sociological cleavages. If the independent variable had been defined as ethnic heterogeneity because the research goal was to determine the association between ethnic heterogeneity and the effective number of parties, this operationalization would be valid. The problem arises because Ordeshook and Shvetsova and (particularly) those who have followed in their footsteps want to generalize beyond the scope of this hypothesis and draw conclusions about the relationship between preference diversity writ large and the party system.[16]

What are the methodological consequences of the invalidity described above? In short, they are bias and inconsistency due to measurement error. Existent latent preference diversity operationalizations systematically underestimate the quantity of interest by ignoring non-ethnic sources of diversity, but the value of the variable is not underestimated by the same constant amount for all countries.[17] Hence, the coefficient on the latent cleavage variable as operationalized by ethnic heterogeneity will be biased and it is likely that the coefficients on other variables will be biased as well.

This problem can be viewed as one of omitted variable bias. Relegating non-ethnic latent cleavages, the systematic measurement error, to the error term is similar to noting that it is a variable that has been omitted. Determining the direction of the bias with more than one included explanatory variable is not straightforward, however. For each included variable, the nature of the bias depends first on its partial correlation with the systematic measurement error (the correlation net of the effect of the other included variables)[18] and second on the multiple regression coefficient on the systematic measurement error from a regression of the dependent variable on the included variables plus the systematic measurement error (Greene 2003, 149). Based on theoretical assumptions about and limited empirical estimates of the value of these statistics, the coefficient on existing operationalizations of the latent cleavages variable (i.e., on ethnic heterogeneity) is likely biased upwards, but it is difficult to say with much certainty. That is, ethnic heterogeneity may be capturing the effect of non-ethnic latent cleavages, which leads us to ascribe too much importance to ethnic relative to non-ethnic cleavages. Again, though, this is a tentative guess: the bias may in fact be downwards. It is not even worth venturing a guess as to the direction of the bias on the other covariates.

Of course, an obvious question is what can be done to rectify this problem. The first step is to develop a measure of the independent variable with greater validity. If this cannot be

[15]The independent variable is defined as "...the exogenous determinants of those preferences that are relevant, a priori, to pressures to increase or decrease the number of political parties" (Ordeshook and Shvetsova 1994, 107), elsewhere referred to as "social heterogeneity" (108).

[16]Ordeshook and Shvetsova (1994) are aware that drawing such a conclusion is problematic, even defining the abstract variable as ethnic heterogeneity. They write, "But our purpose here is not to ascertain precisely how ethnic heterogeneity influences party systems. Rather, we merely want to determine whether the influence of a single institutional variable, district magnitude, on the number of political parties is better described if we take a simple characterization of society's ethnic structure into account, with the understanding that there is considerable room for additional refinements in the conceptualization and measurement of variables" (109). Nevertheless, at various points in their article, they slip back into framing their findings in broader terms, such as 'social diversity' and 'heterogeneous societies' (see, for example, the Abstract).

[17]In other words, $E[\delta] \neq 0$ and $\sigma_\delta^2 \neq 0$, where δ is the measurement error given by the difference of the observed (measured) value of latent preferences and the true value.

[18]This may be better described as the multiple regression coefficient on the variable in the regression of the systematic measurement error on all included variables.

done, the second step is to modify the conclusions that we draw from the empirical analysis. We must "avoid the over-optimism that can result when working with noisy measures. Failing to properly acknowledge the measurement error in latent constructs risks inferential errors" (Treier and Jackman 2003, 44). The fact that none of the operationalizations of latent preference diversity are valid measures of the concept of interest is an errors-in-variable problem that should factor into the substantive conclusions we draw about its relationship to the effective number of electoral parties.

The other approach to the broad research question in the literature, which puts particized preferences on the right-hand side, operationalizes the particized cleavage variable by Lijphart's (1990*a*, 1984, 1999) measure of issue dimensions. This operationalization does not suffer from the face validity problems described above. However, concerns about the lack of explicit data generation procedures (i.e., little reliability) mean that such an evaluation must be hedged. As Chapter 2 argued, validity is not assured with expert judgement approaches like this one since the operationalization relies upon subjective individual coding decisions. As Chapter 2 also argued, it seems likely that Lijphart's data suffers from coding bias. Since all quantitative models with particized preferences on the right-hand side use this data, published conclusions about Hypothesis 3 must be viewed skeptically: the reported empirical relationship between the number of issue dimensions and the effective number of electoral parties may be an artifact of the data generation procedure.

3.4.2 Relationships Between Variables

Empirical models that do not accurately reflect theory regarding the relationships between variables are another problem in the electoral and party systems literature. Both the conclusions about causal effects drawn from and the predictive usefulness of such models must be questioned. The thesis initially discusses the definition of the dependent variable before turning to the endogeneity of the issue dimensions variable that some have employed on the right-hand side.

Lijphart (1990*b*, 1984, 1999), Taagepera and Grofman (1985), Ordeshook and Shvetsova (1994), and Mozaffar, Scarritt and Galaich (2003) all at some point define their dependent variable to be the effective number of legislative parties. Lijphart estimates a correlation coefficient and Taagepera and Grofman both a correlation coefficient and a regression model. However, since Lijphart's intent is to express a causal relationship between the dependent variable of party system (effective number of legislative parties) and the independent variable of issue dimensions (1999, 86), his implied model is identical to Taagepera and Grofman's:

$$\text{ENLP}_i = \beta_0 + \beta_1 \text{ID}_i + \epsilon_i \ , \tag{3.1}$$

where ENLP stands for the effective number of legislative parties and ID for the number of issue dimensions (particized cleavages, in this thesis's parlance). Extending this model to address the research goals of most scholars working in the electoral and party systems literature, to avoid bias, and for comparability with other empirical models,[19] an electoral

[19] A model represented by Equation 3.1 allows us to estimate the relationship between issue dimensions and the effective number of legislative parties. However, since half a century of theoretical and empirical research has argued that the electoral systems variable is related to the effective number of legislative parties and if, as hypothesized in a previous section, the issue dimensions and electoral systems variables are correlated, omission of the electoral systems variable by this model biases the estimate of the relationship between issue

systems variable can be added:

$$\text{ENLP}_i = \beta_0 + \beta_1 \text{ID}_i + \beta_2 \text{ELE}_i + \epsilon_i \ , \tag{3.2}$$

where ENLP and ID are as before and ELE stands for the electoral system. (We can view the latter variable as either an ordinal or interval measure of electoral system restrictiveness, such as average district magnitude.) Ordeshook and Shvetsova (1994) estimate a similar model,

$$\text{ENLP}_i = \gamma_0 + \gamma_1 \text{ETH}_i + \gamma_2 \text{ELE}_i + \epsilon_i \ , \tag{3.3}$$

where ETH stands for the effective number of ethnic groups (latent preference diversity, in our parlance). Mozaffar, Scarritt and Galaich (2003) include the institutional controls first introduced by Cox (the proximity of presidential elections and the effective number of presidential candidates), which are ignored for simplicity along with both of the latters' interactive models. Equations 3.2 and 3.3 are identical except for the independent variable used to represent the abstract concept of preference diversity. They can be viewed interchangeably in the discussion that follows if we temporarily ignore the endogeneity of the issue dimensions variable.

Benoit (2002) has argued that the models expressed by equations 3.2 and 3.3 fail to endogenize Duverger's mechanical effect. He formalizes Duverger's psychological and mechanical effects in a structural model, interaction terms and more complicated electoral systems variables omitted from the original for simplicity:

$$\begin{aligned} \text{ENLP}_i &= \beta_0 + \beta_1 \text{ENEP}_i + \beta_2 \text{ELE}_i + \epsilon_{1,i} & (3.4) \\ \text{ENEP}_i &= \alpha_0 + \alpha_1 \text{ETH}_i + \alpha_2 \text{ELE}_i + \epsilon_{2,i} \ , & (3.5) \end{aligned}$$

where ENLP, ELE, and ETH are as before and ENEP is the effective number of electoral parties. This model properly reflects the theory discussed in the previous section. That is, preference diversity does not directly influence the number of legislative parties. Further, the electoral system directly affects the number of parties in the legislature via the mechanical effect as well as indirectly via the psychological effect. Ignoring the endogenous nature of the effective number of elective parties yields a reduced form model that corresponds to equation 3.3. In this model, $\gamma_0 = \beta_0 + \beta_1\alpha_0$, $\gamma_1 = \beta_1\alpha_1$, and $\gamma_2 = \beta_1\alpha_2 + \beta_2$, where the β- and α-coefficients are taken from equations 3.4 and 3.5. Estimating the reduced form model results in a biased estimate of the structural parameter α_1, the coefficient on preference diversity. Empirical work suggests that β_1 should be less than 1 (Benoit 2002, 41), as does theory: ENLP "will be equal to or less than EN[E]V (unless an electoral rule awards seats to parties receiving zero votes or the difference is an artifact of aggregation from districts)" (38). Hence, the estimated reduced form coefficient on preference diversity, γ_1, will generally be less than or equal to α_1 and the theoretically relevant relationship between preference diversity and the effective number of elective parties will be underestimated by equations 3.2 and 3.3. Underestimation increases as β_1 decreases ($\beta_1 \ll 1$). Conversely, the

dimensions and the effective number of legislative parties. Thus, scholars interested in exploring the causal association between these two variables should use a model represented by Equation 3.2. Additionally, due to the relationship between the electoral and party systems variables, omission of the electoral systems variable by a model represented by Equation 3.1 will lead to a loss in predictive power relative to a model represented by Equation 3.2. Thus, scholars interested in prediction should also use a model represented by Equation 3.2.

mechanical effect, β_2, is overestimated (Benoit's concern). Note that if the structural model is non-recursive, as Benoit argues we have good reason to believe, estimation via OLS will yield biased and inconsistent parameter estimates (40).

The section next discusses the methodological consequences of neglecting the endogeneity of particized cleavages. As argued earlier, particized cleavages are endogenous to the electoral system: political cleavages and electoral systems interact to produce particized cleavages. Even if we focus attention on modeling the effective number of elective instead of legislative parties, where Benoit argues "it is probably more deserved" (45), we still need to adopt a structural model. However, such a structural model must endogenize particized cleavages instead of the mechanical effect described above. One such model, ignoring interactions for simplicity, follows:

$$\begin{aligned} \text{ENEP}_i &= \beta_0 + \beta_1 \text{ID}_i + \beta_2 \text{ELE}_i + \epsilon_{1,i} && (3.6) \\ \text{ID}_i &= \alpha_0 + \alpha_1 \text{PC}_i + \alpha_2 \text{ELE}_i + \epsilon_{2,i} \ , && (3.7) \end{aligned}$$

where ENEP, ID, and ELE are as before and PC represents the number of political cleavages. Equation 3.6 specifies how issue dimensions (again, in the term of this thesis, particized cleavages) and the psychological effect of electoral rules shape both the number of parties that compete and the distribution of votes they receive. Equation 3.7 describes how issue dimensions, in turn, are shaped by political cleavages and electoral rules. A structural model like this one makes explicit the total effect of electoral systems, β_2 and α_2, which reflects the role of electoral systems in first shaping the particized issue space and then, given this issue space, in promoting electoral coordination within it. The total effect should be distinguished from the structural (psychological) effect, β_2, that is usually studied.

Equations of form 3.6 ignore the electoral system's role in filtering political cleavages, the structural effect represented by α_2, and consequently underestimate its total effect. This problem becomes more acute if electoral systems have their greatest effect at the stage in the political process represented by equation 3.7. It might be the case that by the time the electoral system has reduced the number of political cleavages to a few particized cleavages (α_2), it makes only a minor additional contribution by reducing the number of parties competing along each particized cleavage (β_2) via the incentives it provides for either strategic entry or voting.[20] To predict the impact of a change in the electoral system upon the electoral party system, we must take into account these two ways in which electoral systems shape the distribution of votes else risk biased predictions. Our causal understanding, if that is what we seek, of the relative importance of electoral systems will also be biased by the estimation of equations of form 3.6. One way to avoid the former problem is to use an exogenous variable. For example, Cox (1997) estimates equation 3.6 with ethnic fractionalization, a supposedly exogenous measure of preference diversity, substituted for issue dimensions. However, it is impossible to say a priori what the predictive power of this model will be relative to others. Finally, as before, estimation of the structural model by OLS will yield biased and inconsistent parameter estimates if the model is non-recursive, which seems likely.

[20] Taagepera and Grofman (1985), for example, note that there seems to be a link between the type of electoral system and the number of issue dimensions. Electoral systems with multimember districts tend to have more than 2.5 issue dimensions while electoral systems with single member districts tend to have 2 or less issue dimensions.

3.4.3 Other Issues

A few final model specification and estimation issues deserve note. First, Golder and Clark (2003) argue that several studies have not properly tested conditional hypotheses such as Hypothesis 4a, a point that is generally well taken.[21] Second, although the data structures of many tests of the variants of Hypothesis 4 may best be described as time-series cross-sectional, only Golder and Clark (2003) take the special properties of this type of data seriously.[22]

Finally and most importantly, a model specification issue not sufficiently addressed by most researchers in the literature is the appropriateness of the full pooling assumption: that all cross-sectional units and time periods obey the same equation. If this assumption is not justified, OLS coefficient estimates may be biased and inconsistent and OLS itself may be inefficient. Bartels (1996) argues that choosing the set of observations to which a statistical model should be applied is one of the least understood aspects of model specification. Classical techniques confront researchers with the choice of either complete pooling or assuming that the data do not relate at all. Bartels attempts to claim space in the middle ground, although as Beck and Katz (2001) note, the citation fate of his paper has been grim. This characterization applies well to the empirical electoral and party systems literature, which has always assumed complete pooling in spite of scholars' arguments that one model might not in fact fit all polities and time periods (e.g., Moser 1999). This problem has become more acute as the cross-sectional sample of polities has expanded beyond the advanced industrial democracies that have been the literature's traditional focus. Specification issues such as these will be taken up in Chapter 5, which uses an original time series cross-section data set to test extensions of the hypotheses outlined earlier in this chapter and to confront these specification issues head-on.

The fact that operationalizations of the latent preferences variable are for the most part time-invariant potentially complicates matters should theory or specification tests lead to the rejection of the assumption that there is no unmodeled heterogeneity. Under these

[21] They criticize Ordeshook and Shvetsova (1994), Amorim Neto and Cox (1997), and Cox (1997) on these grounds. These scholars do not always include main effects in interactive models and fail to test the statistical significance of the marginal effects of their social cleavage variable. However, Golder and Clark's critique of the specification error in these studies is somewhat overdrawn. It is true that the authors should be taken to task for choosing (on goodness of fit grounds) models that include an interaction term but not the main effects; however, not all of their models impose such arbitrary constraints and risk specification bias (some models estimated do include main effects). Filippov, Ordeshook and Shvetsova (1999) commit a more egregious error in that their models with an interaction between the effective number of ethnic groups and logged district magnitude never include main effects. Similarly, Mozaffar, Scarritt and Galaich (2003) do not include all two-way interactions in the model with the three-way interaction between district magnitude, ethnopolitical group fragmentation and ethnopolitical group concentration.

[22] See Beck and Katz (1995) for a discussion of the special properties of time series cross-section data. Golder and Clark (2003) calculate panel-corrected standard errors without performing specification tests for non-spherical errors. On theoretical but not empirical grounds (they state that a Durbin-Watson statistic reveals no evidence of first-order autocorrelation), they include a lagged dependent variable in their model with the effective number of elective parties on the left-hand side. Mozaffar, Scarritt and Galaich (2003) report robust standard errors, which would not seem to do the best job in accounting for these properties. However, to draw definitive conclusions one way or another, we would have to know more about their data and what is meant by robust standard errors, which they do not specify: several possibilities come to mind, such as White's (1980) heteroscedastic- consistent standard errors or Beck and Katz's (1995) panel-corrected standard errors. Filippov, Ordeshook and Shvetsova (1999) only experiment with analyzing a cross-section and partitioning the data by country to eliminate country-specific effects.

circumstances, a fixed effects model cannot be employed. Alternatives include the random effects and random coefficient models (e.g., Western 1998). The random effects model has usually been viewed as inappropriate, however, because the cross-sectional units in this and similar analyses are not samples from a large population. Rather, as the only polities relevant to the research question, they exhaust the population (e.g., Beck and Katz 1996). As far as the random coefficients model goes, Beck and Katz (2001) note that it has received little attention in applied research.

3.5 Sensitivity of Quantitative Studies

How sensitive are the empirical results summarized in an earlier section of the chapter to different operationalizations of the independent variable of preferences? This is a methodological issue that has received little attention in the empirical literature.[23] Without alternative measures of particized cleavages, it is not possible to evaluate the sensitivity of tests of Hypothesis 3. The fact that these models are primarily descriptive and not inferential suggests, at any rate, that our first priority should be to bring inferential statistical tools to bear. The sensitivity of results from tests of Hypothesis 1 and its interactive counterparts (Hypotheses 4a, 4b, and 4c) to the operationalization of the latent cleavage variable is a valuable and relevant question, though.

3.5.1 Why Do A Sensitivity Analysis?

Only a few scholars have conducted sensitivity analyses despite the fact that all empirical models except Jones (2004) have operationalized the latent preferences variable using a measure of ethnic heterogeneity. Amorim Neto and Cox (1997) and Cox (1997, 214) report that they obtained similar results using the effective numbers of religious, ethnic, and linguistic groups as well as with various combinations of these measures of heterogeneity; however, neither provide the actual results. Ordeshook and Shvetsova (1994) do provide actual results from two alternative operationalizations in a footnote but mainly attribute differences to measurement difficulties with what they view as the more problematic religious and linguistic fractionalization indices.[24] Mozaffar, Scarritt and Galaich (2003) also report differences from the use of three measures of ethnic heterogeneity.[25] The fact that dif-

[23]Ordeshook and Shvetsova (1994) and Filippov, Ordeshook and Shvetsova (1999) find results reasonably robust to a specification of the *dependent* variable as the effective number of electoral parties; the number of parties winning more than 1% of the vote; and the number of parties winning seats in at least two consecutive elections.

[24]They estimate additive models using the effective number of religious and linguistic groups instead of the effective number of ethnic groups. It is not clear why the operationalization that they prefer, a transformation of the ELF index of ethno-linguistic fractionalization, is not subject to the same measurement problems that they feel plague the religious and linguistic indices. For example, they note that "religion is subject to the inherent ambiguity of how people choose to report weak or nonexistent affiliations" (14) and that "the particular difficulty with language is that many people are multilingual, and thus, their classification is arbitrary; similarly, religion poses the problem of how to classify those who either indicate no religious affiliation or classify themselves as agnostic or atheist" (109). As argued in the prior chapter, however, the same problems apply to any classification scheme that does not solely involve physical, observable features of individuals—including ethnicity. Particularly, ELF's reliance upon language subjects it to any criticisms leveled against a linguistic index.

[25]They test what is effectively Cox's model using elections to lower chamber legislatures in African states that were part of the third wave of democratization. Results using their measure of ethnopolitical cleavages,

Polity	Ethnic[a] Fractionalization	Religious[b] Fractionalization	Index[c]
Australia	0.149	0.821	0.970
Belgium	0.567	0.212	0.779
Brazil	0.550	0.605	1.16
Finland	0.132	0.253	0.385
Israel[d]	0.526	0.770	1.30
Portugal	0.0396	0.144	0.184
United States	0.491	0.824	1.32

Table 3.2: Ethnic, religious, and combined latent diversity for seven countries.

[a]Based on data in Fearon (2002).
[b]Based on data in Alesina et al. (2003).
[c]Sum of columns 1 and 2.
[d]My own value of religious fractionalization is used for Israel; see below (footnote 26).

ferent results are obtained in other literatures (e.g., Alesina et al. (2003) regarding growth and government quality) combined with the reported results from two out of the three studies that conducted a sensitivity analysis suggests that the issue deserves review. The minimal theoretical justification for the specific operationalization commonly employed, the effective number of ethnic groups, and for defining the latent cleavage variable as ethnic heterogeneity reinforces this conclusion.

To illustrate why a sensitivity analysis is important for models that include a latent diversity variable on the right-hand side, Table 3.2 provides data on the latent diversity of seven countries using three operationalizations of the variable: religious fractionalization; ethnic fractionalization; and an additive index that combines the latter two indices, weighing them equally. The religious and ethnic indicators classify polities very differently. Using only the ethnic fractionalization index as an indicator of latent diversity, Belgium would be ranked as the most diverse polity. However, using the additive index, which takes into account religious as well as ethnic diversity, Belgium is only the fifth (out of seven) most diverse polity. Similarly, Australia appears religiously but not ethnically diverse, which results in a moderately diverse score (fourth out of seven) on the additive index. In sum, the religious and ethnic indicators classify some polities such as Finland similarly, in which case the additive index yields a similar classification to either single indicator. However, for most polities, the picture varies with the indicator used.

an index of fragmentation that is combined with an index of group concentration, are compared with results using ELF and an index developed by Posner (2004). They report that the latter two operationalizations do not yield statistically significant results while theirs does; however, they do not provide information on differences in the magnitude or direction of the substantive effects. The explanation they offer is that latent diversity (measured by ELF) should not be statistically associated with electoral coordination but that politicized diversity (measured by their operationalization) should be. This plausible argument relates to one raised earlier in the chapter: that a strong association between latent preference diversity and electoral coordination would be surprising because of the weak causal connection between the two.

3.5.2 Sensitivity Analysis for the Latent Cleavages Variable

To explore the sensitivity of empirical tests of hypotheses relating latent preference diversity and electoral systems to elective party systems in legislative electoral contests, the model estimated by Amorim Neto and Cox (1997) and Cox (1997) is replicated using OLS in `R`. This model is:

$$\begin{aligned} \text{ENPV}_i &= \beta_0 + \beta_1 \text{LML}_i + \beta_2 \text{ETH}_i + \beta_3 \text{LML}_i \times \text{ETH}_i + \beta_4 \text{UP}_i \\ &\quad + \beta_5 \text{PROX}_i + \beta_6 \text{ENPRES}_i + \beta_7 \text{PROX}_i \times \text{ENPRES}_i + \epsilon_i \ , \end{aligned} \tag{3.8}$$

where ENPV is the effective number of electoral parties; LML is the logged median district magnitude; ETH is latent preference diversity; UP is the proportion of seats allocated in an upper tier; PROX is the time to the closest presidential election; and ENPRES is the effective number of candidates in the presidential election. As discussed earlier, this model builds upon Ordeshook and Shvetsova (1994), who estimate the same model using a smaller set of cases (only advanced industrial democracies) and without the presidential party system, proximity, and upper tier variables. It has served as the basis for almost all subsequent quantitative research exploring cross-national and cross-time variation in party systems.

The replications here use nine different operationalizations of the latent cleavage variable. Following earlier work, the effective number of groups operationalization (N) is used instead of the fractionalization operationalization (F), although the thesis returns to this issue later in the section. Three operationalizations are different estimates of the effective number of ethnic groups: the first based on the ethno-linguistic fractionalization (ELF) index used by Amorim Neto and Cox (1997), Cox (1997), and Ordeshook and Shvetsova (1994); the second based on data from Alesina et al. (2003); and the third based on data from Fearon (2002). The next three are different estimates of the effective number of religious groups based on data from Alesina et al. (2003); Annett (2001); and Fearon and Laitin (2003*b*).[26] The seventh is the effective number of linguistic groups based on data from Alesina et al. (2003).[27] The eighth is the religious polarization index of Montalvo and Reynal-Querol (2000) based on data from Alesina et al. (2003). Finally, the ninth is the additive index described above: the sum of the ethnic fractionalization index based on data

[26] Since the cases used in this replication study are primarily advanced industrial and Christian states, the biases discussed in Chapter 2 do not pose a significant problem for the religious fractionalization measure with two prominent exceptions: the cases of Israel and India. The religious fractionalization indices for Israel based on Alesina et al., Fearon and Laitin, and Annett's data are 0.347, 0.336, and 0.210, respectively. For Israel, the only Jewish state in the world, the thesis substitutes a religious fractionalization score based on its own list of groups and population figures that disaggregate Judaism. Without this disaggregation, Israel looks more religiously homogenous than it should relative to predominantly Christian states. The list of religious groups and population figures used here, based on the *Statistical Abstract of Israel* 2003, Table 2.1, and Levy, Levinsohn and Katz (2002), results in an index of 0.770 for 1999. The thesis follows the latter in disaggregating Judaism into ultra-Orthodox, modern Orthodox, traditional, secular, and anti-religious branches. The more general problem with these data sets, including other potentially problematic cases such as India, is not addressed here. Future work should grapple with these issues.

[27] A clear mistake in Alesina et al.'s calculation of population shares of linguistic groups for the Netherlands, which reads as follows, has been corrected: Dutch 0%, 'Netherlands Other' 65%, Arabic 19.5%, and Turkish 15.4%. Their data yields a fractionalization score of 0.514. Data from the online *Ethnologue* (`http://www.ethnologue.com`) looks as follows: Dutch 85.5%; Vlaams 1.40%; Turkish 1.21%; Frisian 4.46%; Arabic 1.40%; and Other 6.06%. This yields a fractionalization score of 0.263, which is used instead of Alesina et al.'s.

	Mean	Standard Deviation	Median
ELF	0.271	0.213	0.219
Ethnic (Alesina et al.)	0.302	0.213	0.255
Ethnic (Fearon)	0.330	0.228	0.322
Linguistic	0.224	0.206	0.141
Religious (Alesina et al.)	0.447	0.233	0.414
Religious (Annett)	0.335	0.234	0.295
Religious (Fearon and Laitin)	0.367	0.244	0.320
Religious Polarization	0.621	0.219	0.643
Additive Index	0.771	0.336	0.782

Table 3.3: Descriptive statistics for nine operationalizations of latent preference diversity. Calculated for the 51 cases used in the replication analysis. Fractionalization operationalization, F, used instead of effective number operationalization, N, where applicable.

from Fearon (2002) and the religious fractionalization index based on data from Alesina et al. (2003). The replications use the same 51 cases used by Cox as well as his data where applicable. New data is supplied only for the additional operationalizations of the latent cleavage variable.[28] Descriptive statistics for the nine operationalizations are shown below in Table 3.3 and the Pearson correlation coefficients between the different indices for this sample of polities in Table 3.4.

Perhaps not surprisingly, the results do in fact vary, often dramatically. Table 3.5 summarizes the results from the estimation of the nine models. Standard errors of estimated coefficients are shown in parentheses. The estimated marginal effects of the latent preferences variable using the nine different operationalizations are shown in Figure 3.1 over the range of the median district magnitude data. Figure 3.1 reveals that the religious polarization operationalization has the largest estimated marginal effect at most median district magnitudes. Its marginal effect is negative at small median magnitudes, positive at medium to large median magnitudes, and increasing in median district magnitude. Surprisingly enough, the estimated marginal effects of the three operationalizations of the effective number of religious groups are negative for almost all median district magnitudes

[28]The missing data strategy employed was simple list-wise deletion. The exception was for estimation of the model incorporating the additive index operationalization. Missing ethnic fractionalization scores based on data from Fearon were replaced with scores based on data from Alesina et al. where possible when constructing the index. Where this was not possible, list-wise deletion was employed. Given the small number of initial observations and the reasonably high correlation between the ethnic fractionalization scores based on these two data sets, this missing data strategy seemed preferable to a simple list-wise deletion one. Obviously, more sophisticated strategies (e.g., multiple imputation) could have been used. After applying the appropriate missing data strategy, the number of observations used for estimation ranged from 39 to 51 across models.

	ELF	Ethnic Alesina	Ethnic Fearon	Linguistic	Religious Alesina	Religious Annett	Religious Fearon	Religious Polarization	Additive Index
ELF	1.00								
Ethnic (Alesina et al.)	0.824	1.00							
Ethnic (Fearon)	0.879	0.877	1.00						
Linguistic	0.420	0.463	0.575	1.00					
Religious (Alesina et al.)	0.0841	0.104	0.0821	0.174	1.00				
Religious (Annett)	0.0125	0.0203	0.0200	0.259	0.805	1.00			
Religious (Fearon and Laitin)	0.105	0.193	0.184	0.393	0.886	0.841	1.00		
Religious Polarization	0.00884	−0.014	−0.474	0.154	0.764	0.592	0.488	1.00	
Additive Index	0.599	0.668	0.724	0.516	0.752	0.616	0.743	0.524	1.00

Table 3.4: Correlations between nine operationalizations of latent preference diversity. Calculated for the 51 cases used in the replication analysis. Fractionalization operationalization, F, used instead of effective number operationalization, N, where applicable.

	Ethnic (Alesina et al.)	Ethnic (Fearon)	Ethnic (ELF)	Linguistic	Religious (Alesina et al.)	Religious (Fearon and Laitin)	Religious (Annett)	Religious Polarization	Additive Index
Model	1	2	3	4	5	6	7	8	9
Intercept	2.06	1.71	2.43	1.62	1.84	2.01	2.60	5.13	1.21
	(6.08)	(0.651)	(0.555)	(0.523)	(0.655)	(0.833)	(0.542)	(1.21)	(0.896)
LML	0.170	0.262	−0.249	0.540	0.881	0.974	0.742	−0.678	0.837
	(0.344)	(0.349)	(0.315)	(0.339)	(0.339)	(0.385)	(0.296)	(0.568)	(0.411)
ETH	0.241	0.448	0.0332	0.471	0.182	0.171	−0.0696	−3.63	1.29
	(0.330)	(0.278)	(0.307)	(0.268)	(0.195)	(0.290)	(0.232)	(1.60)	(0.890)
LML	0.210	0.171	0.534	−0.0284	−0.135	−0.173	−0.0918	1.58	−0.341
×ETH	(0.210)	(0.192)	(0.208)	(0.194)	(0.106)	(0.127)	(0.112)	(0.783)	(0.423)
UP	3.75	4.08	3.42	3.83	3.60	3.40	3.42	3.93	4.23
	(1.53)	(1.67)	(1.42)	(1.56)	(1.56)	(1.77)	(1.58)	(1.50)	(1.58)
PROX	−5.91	−5.97	−5.92	−5.67	−6.47	−6.48	−6.46	−6.03	−6.10
	(0.975)	(1.02)	(0.907)	(1.02)	(1.08)	(1.15)	(1.01)	(1.01)	(1.04)
ENPRES	0.182	0.282	0.167	0.163	−0.0713	−0.163	−0.182	0.0586	0.0732
	(0.323)	(0.387)	(0.296)	(0.350)	(0.332)	(0.443)	(0.335)	(0.312)	(0.333)
ENPRES	1.89	1.77	1.83	2.00	2.40	2.45	2.44	2.08	2.16
×PROX	(0.509)	(0.575)	(0.468)	(0.536)	(0.541)	(0.653)	(0.518)	(0.497)	(0.537)
n	51	39	51	47	51	39	48	51	51
R^2	0.676	0.715	0.720	0.686	0.658	0.673	0.685	0.683	0.665

Table 3.5: Estimated coefficients and standard errors for nine interactive models (1–9). Effective number operationalization, N, used instead of fractionalization operationalization, F, where applicable.

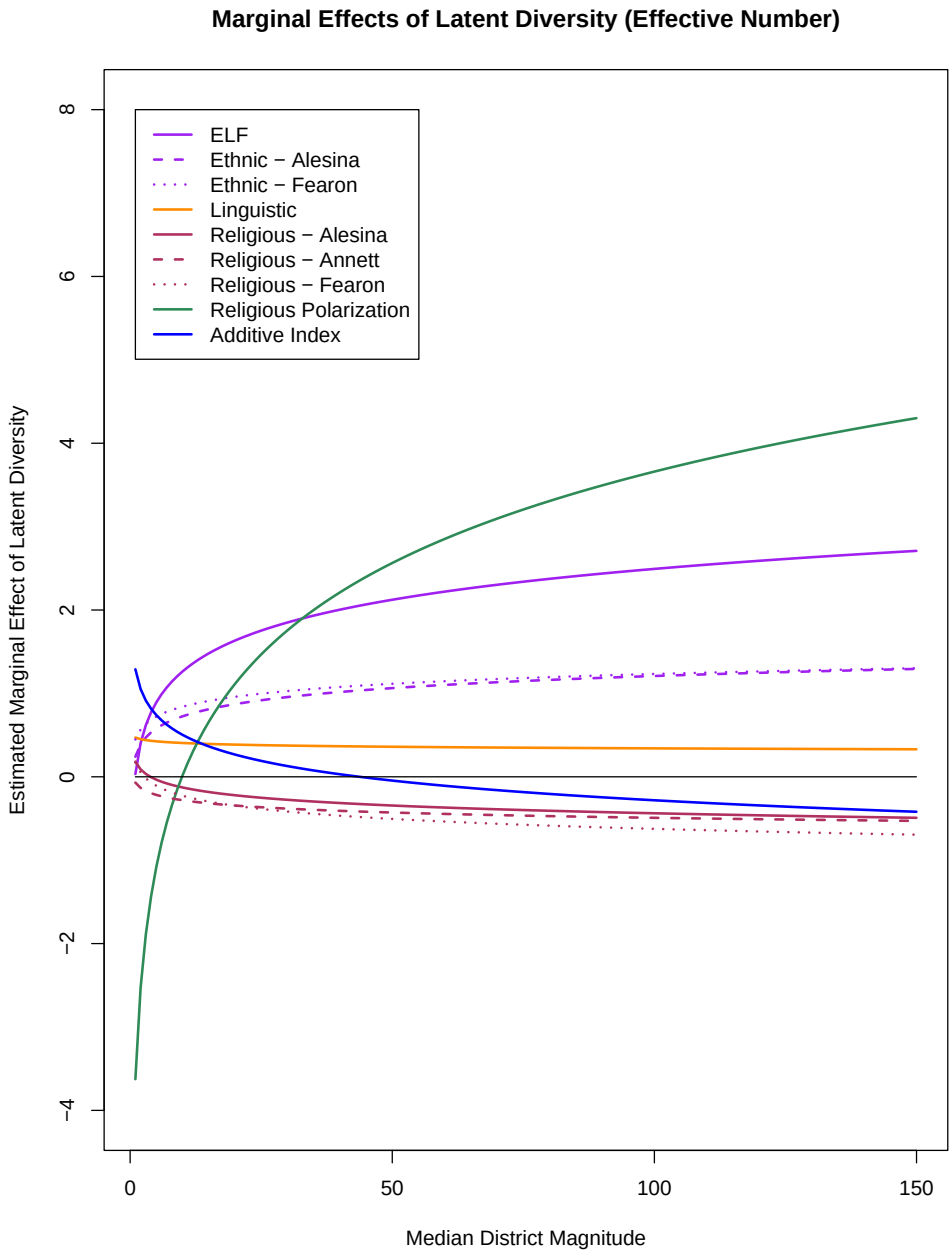

Figure 3.1: The estimated marginal effects of latent preference diversity on the effective number of electoral parties for nine interactive models (1–9) at different levels of median district magnitude.

and decreasing as median district magnitude increases. Similarly, the estimated effect of the additive index is positive only at small to medium district magnitudes and decreasing in median district magnitude. Almost as surprising is the positive but decreasing in median district magnitude estimated effect of the effective number of linguistic groups. In contrast, the estimated marginal effects of all three operationalizations of the effective number of ethnic groups are positive and increasing with median district magnitude, as predicted.

The interaction term between the latent preference diversity and logged median district magnitude variables is statistically significant at conventional levels (for both one- and two-sided tests) for two operationalizations: the effective number of ethnic groups derived from ELF and religious polarization. These two models accordingly provide statistical support for Hypotheses 4a and 4b. While the interaction term is not statistically significant at conventional levels (using either one- or two-sided tests) for the effective number of ethnic groups based on data from Alesina et al. (2003) and Fearon (2002), these two operationalizations provide some support for Hypotheses 4b: the one-sided test statistics are reasonably significant (the p-values are 0.161 and 0.185, respectively) and the estimated coefficients have a positive sign as predicted. For the other five operationalizations, neither Hypothesis 4a nor Hypothesis 4b are supported by the data. A two-sided test for the significance of the marginal effects yields statistically significant results at conventional levels for a reasonable range of median district magnitudes only for the three variants of the effective number of ethnic groups. The marginal effects of the operationalization derived from ELF are statistically significant over almost the entire range.[29] For the one-sided test (Hypothesis 4c), the results are somewhat more encouraging but still varied.[30] Only the marginal effects of the religious polarization, effective number of ethnic groups, and effective number of linguistic groups operationalizations offer suggestive support for Hypothesis 4c, as the signs of the marginal effects for these operationalizations are (mostly) positive as predicted. In sum, the conclusions that we draw about the three hypotheses 4a, 4b, and 4c vary with the operationalization of latent preference diversity used.

What about the substantive significance of the estimated marginal effects? Figure 3.2 displays the estimated conditional effects of the nine operationalizations of latent preference

[29]The standard errors for the marginal effects are computed using the following formula (Greene 2003, 124):

$$Var\left(\frac{\partial \hat{E}\left[\text{ENPV}|X\right]}{\partial \text{ETH}}\right) = Var\left[\hat{\beta}_2\right] + \log(\text{ML})^2\, Var\left[\hat{\beta}_3\right] + 2\log(\text{ML})\, Cov\left[\hat{\beta}_2, \hat{\beta}_3\right].$$

95% confidence intervals or t-statistics are then calculated as usual. The marginal effects of the following operationalizations are statistically significant at the $\alpha = 0.05$ level for the following median district magnitudes: the effective number of ethno-linguistic groups (the operationalization derived from ELF), district magnitudes greater than 2; the effective number of ethnic groups based on data from Alesina et al. (2003), district magnitudes of 3–14; the effective number of ethnic groups based on data from Fearon (2002), district magnitudes of 2–39; the effective number of linguistic groups, district magnitude of 2; religious polarization, district magnitudes of 1–3. The large standard errors and lack of statistical significance are not surprising given the small number of observations.

[30]The marginal effects of the Fearon and ELF variants of the effective number of ethnic groups are statistically significant at conventional levels at all magnitudes; of the Alesina et al. variant of the effective number of ethnic groups at conventional levels through a median magnitude of 77 and very close to conventional levels of significance thereafter; of religious polarization at conventional levels at magnitudes greater than 103 and at reasonable levels of significance from magnitudes of 20–103; and of the effective number of linguistic groups at reasonable levels of significance at magnitudes greater than 10.

diversity with all other variables held at their medians.[31] Specifically, the predicted effective number of electoral parties is calculated over the range of the various operationalizations of preference diversity when the median district magnitude is five; the proximity between executive and legislative elections is zero; the effective number of presidential candidates is zero; and zero percent of seats are allocated in an upper tier. This corresponds to predicted values being calculated for a parliamentary regime that has a single-tier electoral system with a middling median district magnitude, e.g. Ireland. Additionally, 95% confidence intervals are plotted around the point estimates. The vertical lines denote the inter-quartile range of the latent preference diversity data for each operationalization.

It should be apparent from Figure 3.2 that the substantive effect of a change in latent preference diversity, however operationalized, is not large, at least not when the change is within the realm of the plausible.[32] For example, the largest substantive effect when moving across the inter-quartile range of the latent preference diversity data is attained using the effective number of ethnic groups based on Fearon's data. An increase in the effective number of ethnic groups from 1.15 to 2.17 (e.g., from the ethnic heterogeneity of a country such as Austria to that of a country such as Brazil) is predicted to increase the expected effective number of electoral parties by 0.730 (e.g., from the effective number of electoral parties of a country such as the United States to that of a country such as Austria). The substantive impact of plausible changes in latent preference diversity for other operationalizations is much less. In sum, none of the operationalizations of latent preference diversity demonstrate great substantive significance, although the substantive significance of some, such as the effective number of ethnic groups based on Fearon's data, cannot be dismissed out of hand.

A related question is how sensitive the tests of the additive Hypothesis 1 are to the operationalization of latent preference diversity. The nine models from Table 3.5, represented by Equation 3.9, are estimated without the interaction term between the latent preferences and logged median district magnitude variables. As before, the estimation is performed using OLS in `R`. Estimated coefficients on the latent preferences variable and the estimated standard errors for the new nine models are shown below in Table 3.6. The magnitude of the estimated effect of latent preference diversity varies from -0.811 to 0.704 over the nine operationalizations.

The estimated effects of all versions of the effective number of ethnic groups, the effective number of linguistic groups, and the additive index are positive, as predicted. All religious operationalizations are perversely estimated to have a negative effect save for the effective number based on Alesina et al.'s (2003) data, which is for all intents and purposes estimated to be zero.[33] The only two operationalizations that are significant at standard levels (for both one- and two-sided tests) are the effective number of ethnic groups using Fearon's data and the effective number transformation of ELF. The effective number of ethnic groups based on Alesina et al.'s data and the effective number of linguistic groups are both almost significant at conventional levels for the two-sided test and significant for the one-sided

[31] Medians were used instead of means due to the positive skew in the distributions of the other independent variables.

[32] See King and Zheng (2004) for a discussion of the perils of posing counterfactuals that are too far from the data at hand: conclusions drawn will depend upon model assumptions instead of empirical evidence.

[33] Recall that Ordeshook and Shvetsova (1994) also found that religious fractionalization had a negative effect on the party system in an additive model.

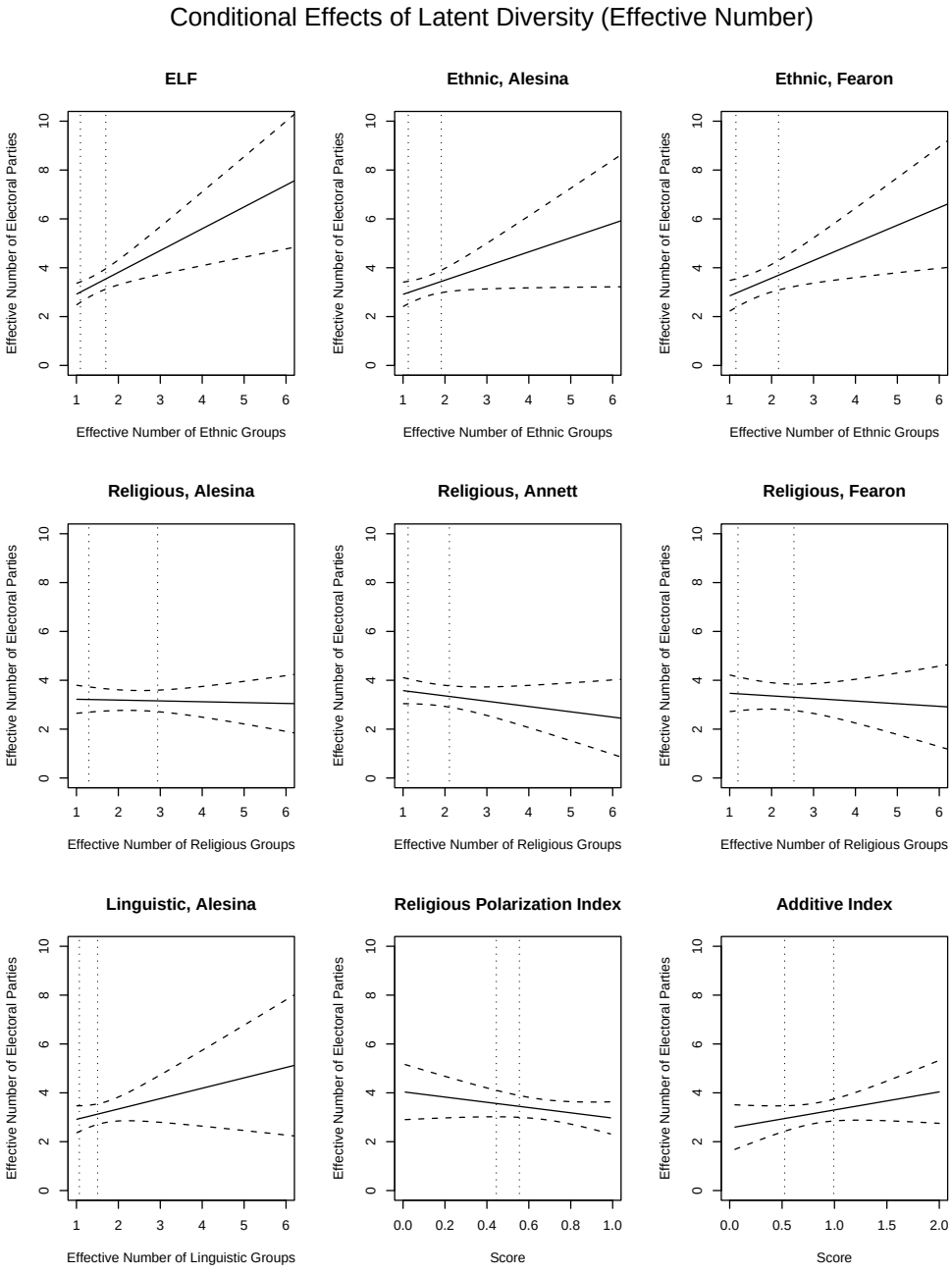

Figure 3.2: The estimated conditional effects of latent preferences on the effective number of electoral parties for nine interactive models (1–9). All other variables held at their medians.

	Model	Estimated Coefficient	Estimated Standard Error
ELF	10	0.529	0.254
Ethnic (Alesina et al.)	11	0.453	0.253
Ethnic (Fearon)	12	0.590	0.223
Linguistic	13	0.453	0.236
Religious (Alesina et al.)	14	0.0116	0.142
Religious (Annett)	15	−0.195	0.173
Religious (Fearon and Laitin)	16	−0.107	0.208
Religious Polarization	17	−0.811	0.808
Additive Index	18	0.704	0.513

Table 3.6: Estimated coefficients and standard errors for latent preference diversity in nine additive models (10–18). Effective number operationalization, N, used instead of fractionalization operationalization, F, where applicable.

test. The additive index operationalization is less strongly but still suggestively supported by the data for both the one- and two-sided tests. Hence, the conclusions we draw about Hypothesis 1 also vary with the operationalization of the latent preference diversity variable: the religious operationalizations do not support it while the others do, although to varying degrees.

3.5.3 Sensitivity to Transformations of N

An important reservation must be raised about the effective number measure used to operationalize the dependent variable in these eighteen models as well as the latent preferences variable in fourteen of the eighteen models. As Fearon (2002, 22) notes, while the interpretation of this measure is intuitive, the resulting distribution tends to be positively skewed. This section evaluates the sensitivity of results to a transformation of N.

Figure 3.3 contains boxplots of the effective number (N), log effective number ($\log(N)$), and fractionalization (F) of electoral parties using the data from Cox (1997) on 51 cases. The effective number of electoral parties served as the dependent variable in the prior replication analyses, of course. The three operationalizations contain the same information, but their distributions have very different shapes, as Figure 3.3 makes clear. Four cases (Switzerland, Belgium, Brazil, and Ecuador) are high outliers (more than 1.5 times the inter-quartile range beyond the third quartile) and there are no low outliers (less than 1.5 times the inter-quartile range below the first quartile) when the effective number measure is used. Three of these four cases are high outliers when the log of the effective number is used (Belgium, Brazil, and Ecuador) and there are again no low outliers. Conversely, when the fractionalization measure is used, there are neither high nor low outliers. The heavy upper

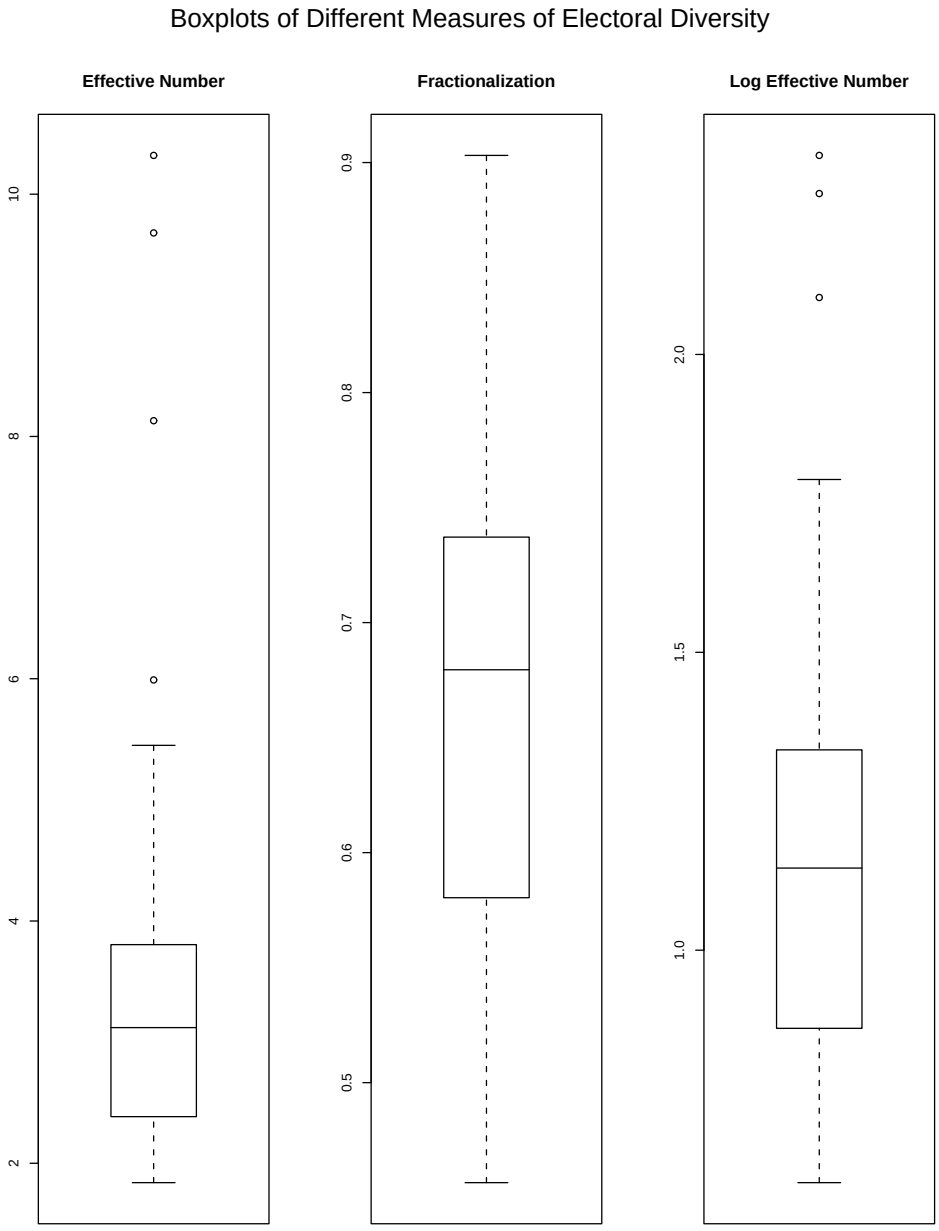

Figure 3.3: Boxplots of the distribution of electoral diversity using N, $\log(N)$, and F. Calculated for the 51 cases used in the replication analysis.

tail of the effective number distribution is also visually reflected in the relative lengths of the upper and lower whiskers. Of the three operationalizations, the effective number appears the most skewed and the fractionalization the least. Overall, the boxplots illustrate the relatively large positive skew in the distribution of the effective number measure of electoral diversity. Boxplots of N, $\log(N)$, and F for several measures of the latent preferences variable reveal a similar relative positive skew, which may give undue influence to diverse countries such as the four identified above.[34] For these practical reasons, the fractionalization operationalization is preferable to both alternative operationalizations and the log effective number operationalization preferable to the effective number operationalization.

To investigate how a transformation of N for the dependent and latent preferences variables affects the result discussed above, the nine models from Table 3.5, represented by Equation 3.9, are re-estimated. For models 1–7, electoral fractionalization is used instead of the effective number of electoral parties as the dependent variable and ethnic, religious, and linguistic fractionalization is used instead of the effective number of ethnic, religious, and linguistic groups. Models 8–9 from the same Table are re-estimated using the fractionalization operationalization of the dependent variable. Table 3.7 summarizes the results from the estimation of the new nine models. Standard errors of estimated coefficients are shown in parentheses.

The estimated marginal effects of latent preference diversity for the nine new models over the range of the median district magnitude data are shown below as Figure 3.4. The derivatives of the marginal effects with respect to median district magnitude all have the same sign as before. The effects of the three religious fractionalization, linguistic fractionalization, and additive index operationalizations are again all decreasing in median district magnitude contrary to predictions. The effects of religious polarization and the three ethnic fractionalization operationalizations are again all increasing in median district magnitude as predicted. The signs of the marginal effects for most operationalizations remain the same over the range of median district magnitudes. Minor differences are that now ethnic fractionalization based on Alesina et al.'s (2003) data and ELF both have negative effects at low median district magnitudes instead of always being positive (effects are negative at magnitudes 1–11 and 1–3, respectively); religious polarization first has a positive effect at a higher median district magnitude (at 23 instead of 10); and the three religious fractionalization and additive index operationalizations first have negative effects at lower median district magnitudes (i.e., no longer have much of a positive effect). The conclusions that are drawn regarding Hypotheses 4a–4c are now much weaker although they remain qualitatively similar. The marginal effects for all nine models are not statistically significant at conventional levels (for either one- or two-sided tests) at any median district magnitude. The same operationalizations that previously provided statistical support for Hypothesis 4c (ethnic fractionalization, linguistic fractionalization, and religious polarization) now only offer suggestive support, as the estimated signs of the marginal effects are as predicted but are not statistically significant. The other operationalizations, as before, do not even offer suggestive support. The interaction term between the logged median district magnitude

[34] All nine models from Table 3.5 contain cases with dangerously high leverage using Huber's (1981) absolute criteria (i.e., several cases with leverage between 0.2 and 0.5 and one case, Ecuador, with leverage usually equal to or slightly greater than 0.5). Further, several cases are influential using a size-adjusted criteria for Cook's Distance in all nine models and one case, Ecuador, is influential using an absolute criteria ($D > 1$) for model 3 (Cook and Weisberg 1982).

	Ethnic (Alesina et al.)	Ethnic (Fearon)	Ethnic (ELF)	Linguistic	Religious (Alesina et al.)	Religious (Fearon and Laitin)	Religious (Annett)	Religious Polarization	Additive Index
Model	19	20	21	22	23	24	25	26	27
Intercept	0.607	0.604	0.619	0.551	0.592	0.582	0.577	0.656	0.569
	(0.0335)	(0.0425)	(0.0315)	(0.0303)	(0.0701)	(0.0567)	(0.0429)	(0916)	(0.0663)
LML	0.0327	0.0363	0.0219	0.0465	0.0488	0.0654	0.0641	0.0172	0.0532
	(0.0158)	(0.0171)	(0.0138)	(0.0162)	(0.0328)	(0.0984)	(0.0852)	(0.121)	(0.0658)
ETH	−0.0693	0.0155	−0.110	0.104	−0.0156	0.0267	0.0238	−0.0969	0.0151
	(0.0854)	(0.0923)	(0.0839)	(0.0833)	(0.109)	(0.0984)	(0.0852)	(0.121)	(0.0658)
LML	0.0283	0.00995	0.0801	−0.0168	−0.0169	−0.0467	−0.0406	0.0311	−0.0135
×ETH	(0.0456)	(0.0436)	(0.0448)	(0.0442)	(0.0513)	(0.0443)	(0.0419)	(0.0592)	(0.0313)
UP	0.252	0.226	0.237	0.288	0.261	0.219	0.234	0.274	0.273
	(0.115)	(0.122)	(0.112)	(0.112)	(0.113)	(0.112)	(0.108)	(0.114)	(0.117)
PROX	−0.274	−0.299	−0.277	−0.264	−0.296	−0.332	−0.324	−0.274	−0.273
	(0.0734)	(0.0711)	(0.0710)	(0.0742)	(0.0792)	(0.0748)	(0.0720)	(0.0764)	(0.0771)
ENPRES	0.00580	0.00490	0.00796	0.0148	0.00426	−0.0115	−0.00989	0.00751	0.00431
	(0.0242)	(0.0273)	(0.0232)	(0.0261)	(0.0243)	(0.0287)	(0.0238)	(0.0236)	(0.0246)
ENPRES	0.0936	0.0950	0.0879	0.0868	0.101	0.122	0.119	0.0952	0.101
×PROX	(0.0379)	(0.0402)	(0.0366)	(0.0396)	(0.0402)	(0.0433)	(0.0371)	(0.0376)	(0.0397)
n	51	39	51	47	51	39	48	51	51
R^2	0.562	0.574	0.586	0.600	0.563	0.611	0.619	0.563	0.557

Table 3.7: Estimated coefficients and standard errors for nine interactive models (19–27). Fractionalization operationalization, F, used instead of effective number operationalization, N, where applicable.

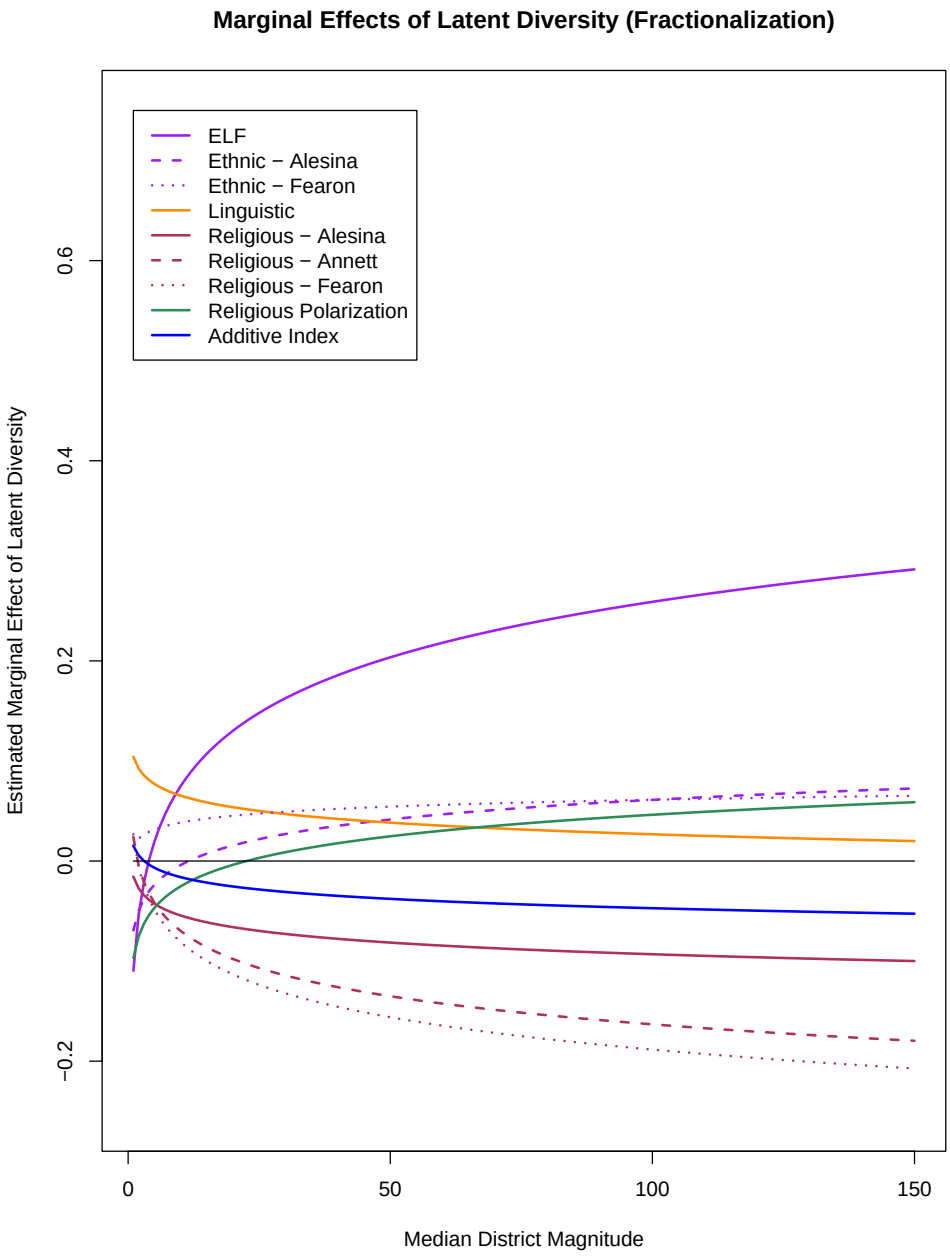

Figure 3.4: The estimated marginal effects of latent preference diversity on electoral fractionalization for nine interactive models (19–27) at different levels of median district magnitude.

and latent preference diversity is now only significant at conventional levels for the model containing the ELF operationalization (for the one-sided test) and at close to conventional levels (for the two-sided test) for the same operationalization. In all other models, the term does not come close to attaining statistical significance at conventional levels (for either one- or two-sided tests). Suggestive support for Hypothesis 4b is again only offered by the ethnic and religious polarization operationalizations, for which the sign of the interaction term is positive as predicted; the sign is negative for all other operationalizations, contrary to predictions. Hence, there is only limited, suggestive empirical support for Hypotheses 4c; weak statistical support for Hypothesis 4a from one model; and statistical support for Hypothesis 4b from one model as well as suggestive empirical support from three others.

Additionally, the new models with the dependent and, for some, latent preference diversity variables operationalized as fractionalization have next to no substantive significance. The estimated conditional effects of latent preference diversity over the range of the data are shown below in Figure 3.5. All other variables are held at their medians and vertical lines show the interquartile range for each operationalization as before. For the new models, the largest substantive effect when moving across the inter-quartile range of the latent preference diversity data is attained using linguistic fractionalization. An increase in linguistic fractionalization from 0.0646 to 0.336 (e.g., from the linguistic heterogeneity of a country such as Argentina to that of a country such as Australia) is predicted to increase the expected electoral fractionalization by 0.024 (e.g., from the electoral fractionalization of a country such as Japan to that of a country such as Norway). The decreased substantive significance of the results using the fractionalization instead of the effective number operationalizations is illustrated by comparing the predicted conditional effects of the model using ethnic fractionalization based on Fearon's data with the same model using the effective number of ethnic groups discussed earlier. The fractionalization model predicts that an increase in ethnic fractionalization across the inter-quartile range of the data from 0.130 to 0.538 (e.g., from the ethnic heterogeneity of a country such as Finland to that of a country such as Israel) will increase the expected electoral fractionalization by 0.013 (e.g., from the electoral fractionalization of a country such as Ireland to that of a country such as Norway). Clearly, the substantive effect of latent preference diversity when both it and the dependent variable are operationalized as fractionalization is much attenuated relative to the substantive effect using the effective number operationalization.

Similarly, the nine additive models from Table 3.6 are re-estimated using electoral fractionalization as the dependent variable and, for models 9–16, the appropriate fractionalization index as the right-hand side latent preference diversity variable. The magnitude of the estimated effect of latent preference diversity varies from -0.0957 to 0.0834, as shown below in Table 3.8. This time around, only the estimated effects of ELF, linguistic fractionalization, and ethnic fractionalization based on Fearon's data are positive as predicted. All other operationalizations are estimated to have a negative effect. The only operationalization that is close to significant at standard levels (both one- and two-sided tests) is linguistic fractionalization. Accordingly, the conclusions we draw about Hypothesis 1 again vary with the operationalization of the latent preference diversity variable but we are now almost conclusively led to reject it: there is little statistical support in the data for the hypothesis that latent preference diversity has a positive effect on electoral fractionalization. The substantive significance of the effects is likewise minimal.

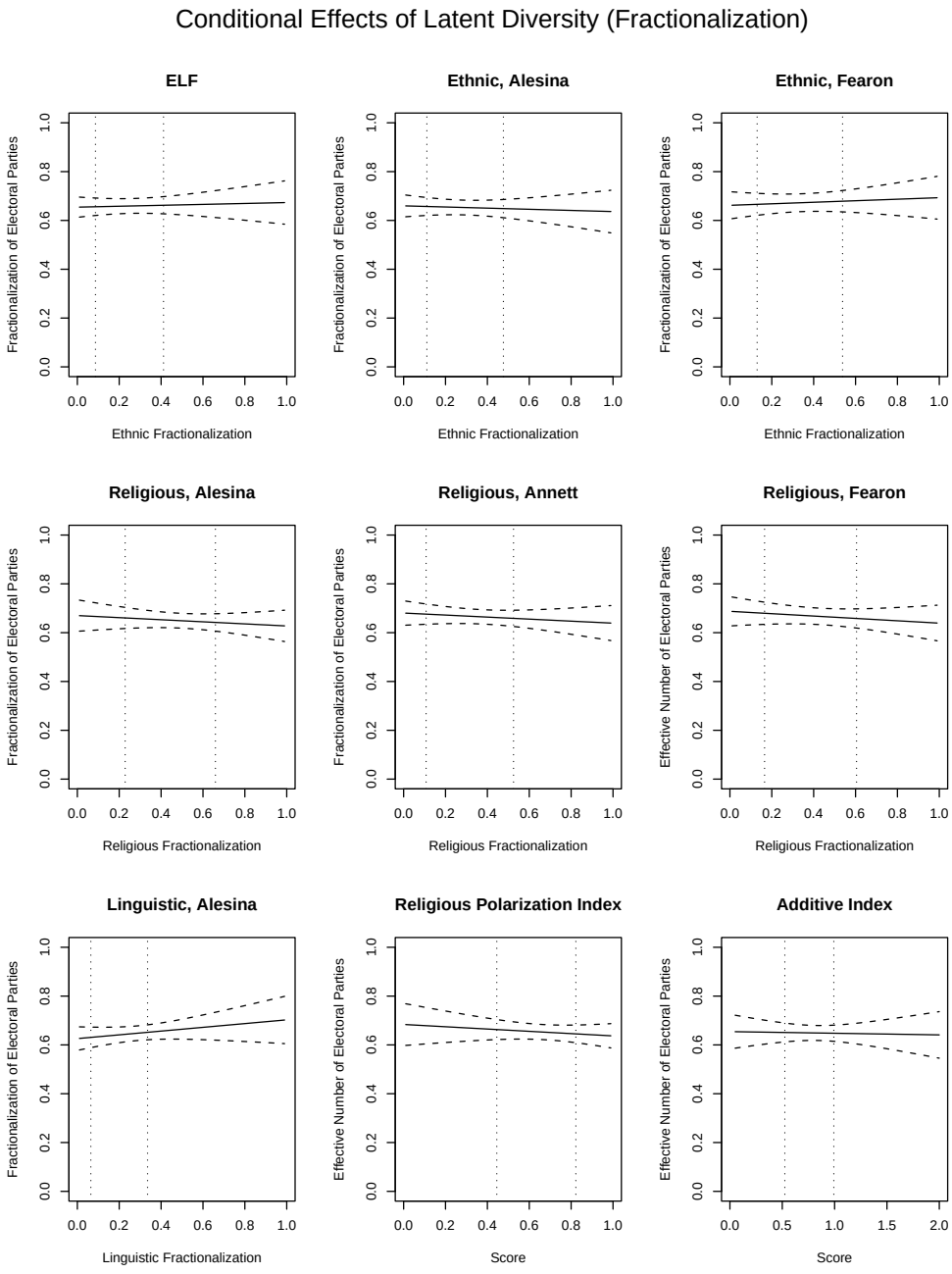

Figure 3.5: The estimated conditional effects of latent preference diversity on electoral fractionalization for nine interactive models (19–27) at different levels of median district magnitude. All other variables held at their medians.

	Model	Estimated Coefficient	Estimated Standard Error
ELF	28	0.00263	0.0569
Ethnic (Alesina et al.)	29	−0.0299	0.0568
Ethnic (Fearon)	30	0.0314	0.0595
Linguistic	31	0.0834	0.0622
Religious (Alesina et al.)	32	−0.0462	0.0553
Religious (Annett)	33	−0.0408	0.0531
Religious (Fearon and Laitin)	34	−0.0588	0.0559
Religious Polarization	35	−0.0416	0.0586
Additive Index	36	−0.0957	0.0373

Table 3.8: Estimated coefficients and standard errors for latent preference diversity in nine additive models (28–36). Fractionalization operationalization, F, used instead of effective number operationalization, N, where applicable.

3.5.4 Summarizing Results

The conclusions that we draw from empirical tests of Hypotheses 1, 4a, 4b, and 4c depend greatly on how we operationalize the latent cleavage variable, such as ethnic versus religious heterogeneity or as fractionalization versus effective number. The same is true for the dependent variable's operationalization as fractionalization or effective number.

Strongest across-the-board support for the hypotheses comes from operationalizing latent preference diversity as ethnic fractionalization (or the effective number of ethnic groups); all such operationalizations either suggestively or statistically support the abstract hypothesis that for permissive electoral systems, increases in latent preference diversity will increase electoral party system fractionalization. However, other operationalizations such as religious fractionalization (or the effective number of religious groups) and an additive index combining ethnic and religious fractionalization support a very different abstract hypothesis: that for permissive electoral systems, increases in latent preference diversity will decrease electoral party system fractionalization. Further, both statistical and substantive significance is attenuated when using a transformation of N such as F or $\log(N)$, although the signs of estimates appear robust.[35] Results are clearly not robust to the choice of operationalization. As has been noted above, in addition to the conclusions we ultimately draw about the hypotheses, the substantive effects of the various models vary greatly. Without theoretical justification for preferring one operationalization to others, it is difficult to know

[35]Similar results are obtained using the log of the effective number, $\log(N)$. As with the fractionalization operationalization, the signs of effects are largely the same as those obtained using the effective number operationalization, but statistical and substantive significance is attenuated. These results are not shown here for reasons of space.

what conclusions should be drawn about hypotheses relating latent preference diversity to party systems. Of course, the criticism of existing models raised in the prior section—biased estimates from systematic measurement error—applies to the results discussed here, as most of these models operationalize the latent cleavage variable by scoring polities on only one criteria such as ethnicity or religion.

One final caveat about these results should be noted. The electoral and institutional data is from the mid-1980s but the data for some latent cleavages variable operationalizations is from the 1990s. This includes religious fractionalization based on data from Fearon and Laitin (2003*b*); ethnic fractionalization based on data from Fearon (2002); and the three indices based on data from Alesina et al. (2003). The reasonably high correlations between these two operationalizations of ethnic fractionalization with ELF, from the 1960s, as well as between these two operationalizations of religious fractionalization with that based on data from Annett (2001), from the 1980s, suggests that this may not be cause for alarm. Additionally, Fearon and Laitin (2003*a*, 4) note that there does not seem to be much change over time in their list of religious groups and population shares. In general, significant changes in latent sociological cleavages such as religion, language, and ethnicity are likely to be generational and hence a matter of decades. Nevertheless, future work should estimate similar models using electoral and institutional data from the 1990s.

3.6 Quo Vadis?

All of this naturally leads to the question of how we can build upon the rich theoretical electoral and party systems literature to improve existing empirical models. It is worth noting at the outset how far we have come. From early work that tended to deny a role to either institutions or to preferences—i.e., that leaned towards either institutional or sociological determinism—recent work has moved to integrate the two, as exemplified by Cox (1997). The importance of this development cannot be understated: both theoretically and empirically, productive engagement has replaced sniping across trenches. Still, the book is far from closed, as this chapter has sought to demonstrate. Theoretically, important questions remain to be answered. Empirically, better measures of abstract concepts need to be developed and appropriate estimation techniques employed.

One key argument of this chapter is that the stage in issue evolution that is theoretically and empirically related to the party system should correspond to a scholar's research goals. Latent cleavages may either be associated with electoral coordination or they may not be. This is an empirical matter that only a good research design can—and should—resolve. However, regardless of the strength of such an association, this relationship is not causal. Demographic factors such as ethnic fractionalization cannot be explanatory in a general sense as we cannot tell a deductive story that links them to the dependent variable of interest. It is only fair to note that avenues for future exploration exist here: such a story may be able to be told for countries characterized by distributive politics and particular latent cleavages such as ethnicity. Even without aiming for causality, though, more theorizing is called for to grapple with the potential endogeneity of demographic variables. Constructivist scholars (e.g., Chandra and Boulet 2003) are increasingly challenging the notion that demographics—latent preferences—can be viewed as exogenous to dependent variables such as party competition. Specifically, greater attention to the context in which demographics influence a dependent variable such as the party system is needed.

At the moment, given the current state of theory, researchers interested in causal argument will need to test hypotheses involving politicized and particized cleavages. As the chapter has argued at length, however, such an approach is unfortunately not free of complications. The endogeneity of particized (and probably also politicized) cleavages must be addressed by the empirical analysis. Further, given the shortcomings in existing data sets discussed by Chapter 2, meaningful empirical tests of these hypotheses are not possible. Both of these empirical issues should be resolved by future work, the topic of Chapters 4 and 5. Additionally, as will become apparent once one tries to think through the deductive story that underpins the causal argument, the link between even these types of preferences and electoral coordination is currently under-theorized, a deficiency that cries out for remedy. Chapter 5 and, to some extent, Chapter 6 attempt to address this problem.

This chapter has attempted to highlight and account for the diverse empirical modeling choices made for the abstract concept of preferences in the electoral and party systems literature. The operationalization of this independent variable has varied greatly in recent studies—from ethnic fractionalization to issue dimensions—as has its relationship to other variables. Underlying this empirical diversity are different research goals and theories. Different definitions of the abstract concept have been employed—from long-term, latent, and sociological cleavages to long-term, particized, and non-sociological cleavages—and different relationships between electoral systems and preferences embedded in hypotheses. Despite movement in the last decade towards integrating the institutional and sociological perspectives, many important theoretical and empirical questions remain about how preferences affect the party system. Most scholars want to conclude that both types of variables matter: that both preferences and institutions affect political outcomes. However, the chapter has hopefully demonstrated that this theoretical conviction currently remains just that: theoretical conviction without strong empirical substantiation. In order to conclude that preference diversity does in fact relate in a statistically and substantively significant way to the size-weighted number of parties, further empirical work is required. And this, in turn, cannot happen without allowing theory to play a greater role than it has in the past.

Part II

Towards Solutions

Chapter 4

New Measures

This chapter develops new measures of particized and latent preferences. It seeks to identify both the number and the nature of the particized and latent ideological cleavages that underpin political competition in modern democracies. Unfortunately, it is not possible to develop a valid and reliable measure of political preferences at this time due to the lack of comparable and appropriate cross-national data, as discussed in Chapter 2.

The estimates derived from the measures allow one of the first looks at how particized and latent preferences vary across both time and space. With respect to particized preferences, the results presented here aid scholars in answering questions about the battle lines drawn between political parties in a country. We might legitimately wonder if conflict is about socioeconomics, e.g. issues such as the level of redistribution and the overall size of government; ethnicity, e.g. issues such as discrimination and the language in which state business is conducted; or both. In addressing these issues, this chapter provides data on cross-national and -time variation in the political agenda itself. This is an empirical issue worthy of attention in its own right as well as in relation to theories about consequential political outcomes such as the party system, government stability, and the content of public policy. As an issue in its own right, formal theories are based on assumptions about the particized ideological space; without empirical data, the accuracy of both these assumptions and the resulting predictions cannot be assessed. As an issue in relation to other theories, hypothesized relationships between characteristics of the particized ideological space and various dependent variables cannot be validly tested without empirical data. With respect to latent preferences, implicit theories about the relationship between latent, political, and particized cleavages need empirical testing, as do explicit theories relating latent preferences to outcomes.

Many country specialists have identified the latent and particized cleavages that are salient in their particular polity by drawing upon their intimate knowledge of its day-to-day politics and history. Such qualitative analyses, valuable for their rich portraits of political life, do not allow us to systematically compare countries, nor do they produce measures suitable for input into a quantitative analysis. Comparativists such as Lijphart (1999), wearing generalist and not area specialist hats, have tried but failed to speak to the problems of comparative and quantitative analyses involving particized cleavages. Similarly, quantitative measures of latent preference diversity developed by comparativists such as Ordeshook and Shvetsova (1994) only tap at most the two cleavages of religion and ethnicity and consequently are not valid. This chapter seeks to both qualitatively and quantitatively

fill in the empirical gaps, shedding light on the dimensionality and nature of both the latent and particized ideological spaces.

The chapter first develops measures and provides estimates of particized, short-term, non-sociological preferences. It constructs comparable qualitative lists of the salient particized cleavages in advanced industrial democracies. It goes on to provide estimates of the dimensionality of the particized ideological space for the same countries. These estimates are suitable for use in quantitative analyses. Second, the chapter develops a measure of long-term, non-sociological latent preference diversity that has greater validity than existing measures. Indicators of the likelihood that a particular division will be politicized or particized are identified for a set of potentially relevant cleavages. These measures of the salience of latent cleavages are then combined to measure the overall latent preference diversity of a polity.

4.1 Particized Cleavages

This section proposes new measures of the particized cleavage structure. It utilizes the Comparative Manifesto Project's 2001 data on the salience of 56 issues in political party manifestos for 24 advanced industrial democracies from 1945 to the late 1990s (Budge et al. 2001), which was described at some length in Chapter 2. The goal is to identify the nature of political conflicts in each polity at the elite level as well as the size (dimensionality) of the ideological space underpinning political competition in a given election. The operationalizations, in other words, are to yield time-series cross-section data. The time periods and countries included in the Comparative Manifesto Project and analyzed in this section are shown in Table 4.1. The measures proposed are comparatively simple and theoretically-driven. They are not developed using data reduction statistical techniques such as item response modeling, principal components, or factor analysis that have elsewhere been applied to elicit dimensionality. Nevertheless, they both sufficiently confirm our understanding of political competition and contain enough new insights to serve as useful preliminary measures.

Before delving into the specifics of the measures, it is worth reviewing the rationale underlying the approach taken by this chapter, a subject originally laid out in Chapter 2. The Comparative Manifestos Project data is used here because data simply does not exist—and will not, barring Herculean investments of both money and time—to proceed according to the other two possible approaches, analysis of either political elite survey data or roll-call votes in legislatures. As Chapter 2 argued at length, existing cross-national surveys of political elites are even more limited in the cases included than the Comparative Manifestos Project and, more importantly, neglect key cleavages such as ethnicity. Valid measures of particized cleavages cannot be constructed from such data. Similarly, to the best of my knowledge, roll-call data has not been compiled for a sufficiently large set of cases to allow for meaningful cross-national comparisons. At any rate, it is not clear what meaning such votes have, if they exist, in polities other than the presidential, candidate-centered systems such as that of the U.S. where roll-call analyses were pioneered. Hence, particized cleavages are identified using the content analysis of party manifestos provided by the Comparative Manifestos Project.

Moreover, data-driven statistical techniques such as item response modeling and principal components analysis are not utilized to elicit dimensionality from the Comparative

Polity	Time Period
Australia	1945–1998
Austria	1945–1998
Belgium	1945–1998
Canada	1945–1998
Denmark	1945–1998
Finland	1945–1998
France	1945–1998
Germany	1945–1998
Greece	1974–1996
Iceland	1945–1998
Ireland	1945–1998
Italy	1945–1998
Israel	1945–1998
Japan	1960–1996
Luxembourg	1945–1998
Netherlands	1945–1998
New Zealand	1945–1998
Norway	1945–1998
Portugal	1975–1995
Spain	1977–1996
Sweden	1945–1998
Switzerland	1945–1998
United Kingdom	1945–1998
United States	1945–1998

Table 4.1: The countries and time periods from the Comparative Manifestos Project to be analyzed.

Manifestos Project data for the following two reasons, also touched upon in Chapter 2. First and foremost is the structure of the data. With salience coded across 56 issues and a small (almost always much less than ten and at minimum two) number of observations for each country–election, data-driven statistical techniques cannot be applied to produce a time-series cross-sectional measure: the number of variables greatly outstrips the number of observations in a single country–election. Such techniques can, at best, average over time in a polity, which vitiates the achievement of one of the goals of the thesis.

Second is the content of the data. For whatever reason, as Warwick (2002) has noted, the correlations between coding categories in the Manifesto Research Group and Comparative Manifestos Project are quite low. Sets of issues (coding categories) that theory unambiguously tells us should go together often do not correlate in the data, either pooling across polities and time or pooling across time within a polity. For example, in the United States, the coding categories 'Market Regulation' and 'Keynesian Demand Management', both clearly sets of issues that relate to economics, correlate at 0.030. Similarly, in the entire data set, the categories 'Peace' and 'Military: Positive' only correlate at -0.104, despite the fact that these sets of issues both relate to armed conflict or, more generally, to foreign policy. Warwick hypothesizes that the low correlations may be due to the coding methodology. Alternatively, political parties simply may not discuss related issues consistently. A less fundamental explanation that may be due in part to either of the above is that the data does not come close to following a normal distribution. Many observations have zero values for many coding categories; most coding categories that are non-zero for an observation contain small values (e.g., averaging across time and space, the coding category to which the largest percentage of party manifestos is devoted has a mean of only 6.18%); and there are extreme outliers with large values (e.g., in Portugal's April 1975 election, the Popular Democratic Union devoted 50.4% of its manifesto to issues captured by coding category PER202, 'Democracy'). In fact, the data's empirical distribution resembles either an exponential or a log-normal.[1] In the case of non-normal data like this, correlation coefficients have a smaller range than the usual reference interval of $[-1, 1]$.[2] Further, when the relationship between the variables varies with their levels (heteroskedasticity), the correlation coefficient is a misleading average of points of lower and higher correlation. It is only natural to think that this is occurring in this data, as the relationship between coding categories certainly changes over time and across countries.

The end result of all this is that statistical techniques for data reduction such as principal components analysis do not yield very parsimonious solutions. Using almost any conventional approach to decide how many principal components to retain leaves the reduced dimensionality still quite high with three or more—and often as many as ten or fifteen—dimensions (e.g., Budge, Robertson and Hearl 1987, Warwick 2002).[3] Again, data reduction

[1] Thanks go to Gary King for a discussion of this and other aspects of the Comparative Manifestos Project data.

[2] The range of correlation coefficients between two exponential and two log-normal variables has been estimated to be $[-0.6450, 1.000]$ and $[-0.3679, 1.000]$, respectively. Similarly, the range of the correlation coefficients when the marginal distribution of one variable is log-normal and the other exponential is estimated to be $[-0.4885, 0.9215]$. In other words, if two variables cannot differ only in the location and/or scale parameters of their distributions, i.e. cannot be linearly related over all possible joint distributions, the correlation coefficient will be attenuated. See Shih and Huang (1992) for more details.

[3] Our intuitions and formal theory both tell us that the particized ideological space should often be of much lower dimensionality than this. If we were confident in our methodology, this might be an interesting

techniques and other empirical methods that let the data speak for itself do not work as we would like on this data.

Accordingly, the thesis adopts the simpler and more theoretical approach suggested by Budge et al. (2001) to circumvent these problems. Accumulated substantive knowledge can be brought to bear on the data. Simply because political parties set the political agenda by discussing issues such as 'Peace' and 'Military: Positive' inconsistently (reflected by low correlations between the categories in the data, for example) or because the coding methodology distorts their consistent talking does not mean that these issues are not in fact related to a common, underlying political conflict. In a sense, pertinent information that is not in the data—that these categories relate—can be supplied by the analyst. While this approach opens the door to others leveling similar criticisms against this approach to those leveled against Moreno (1999) in Chapter 2, the alternative is to abandon the endeavor. Criticisms of this sort can be at least be partially answered by extensive sensitivity analyses, which will be conducted in both this and the following chapters; by relying on past data-driven empirical studies that have sought to elicit dimensionality and determine which coding categories (issues) tend to load onto which dimensions; and by stressing that these results are preliminary, the best possible at this moment in time, and hedging conclusions accordingly. Future work should certainly assess the validity of these measures against data-driven operationalizations derived from the elite survey data or roll-call data that will hopefully one day be collected. Indeed, this thesis calls for such work to be done and will welcome such comparisons.

4.1.1 The Operationalization

It is now time to turn to the operationalization of the particized cleavage variable developed by this thesis, which is motivated by a simple hypothesis. The more space in its manifesto that a party devotes to discussing issues related to an ideological cleavage, the more salient the cleavage to the party. Similarly, the more space devoted by all parties in their manifestos for a given election to an ideological cleavage, the more salient the cleavage in the polity at that point in time. If the parties in a polity are devoting the vast majority of their manifestos to the issues related to one ideological cleavage, the ideological space underlying political competition can be viewed as one dimensional. Alternatively, if either the parties split their manifestos (reasonably) evenly between issues related to two ideological cleavages or the manifestos of half of the parties relate to one cleavage and the manifestos of the other half to another, the ideological space can be viewed as two-dimensional, and so on. Two key decisions must be made to implement this approach: first, which ideological cleavages will be considered potentially salient and second, which issues (coding categories in the Comparative Manifestos Project data set) are related to which ideological cleavage.

The set of ideological cleavages that are considered potentially salient are drawn from the comparative politics literature at large, from Lipset and Rokkan (1967) to Lijphart (1999). The seven cleavages are the socioeconomic; ethnic–cultural; religious; foreign policy; urban–rural; post-materialist; and democratic-authoritarian. Lipset and Rokkan discussed four of these cleavages (the socioeconomic, ethnic–cultural, religious, and urban–rural) in their seminal work, although under slightly different names (i.e., the class, center–peripheral,

finding. If, however, we are not (and this thesis, for one, is not for the reasons outlined here), such a result should only strengthen our conviction that the methodology is not appropriate for the data at hand.

state–church, and urban–rural, respectively). Inglehart (1977, 1984) of course popularized the notion of a post-materialist cleavage, which corresponds in many ways to Kitschelt's (2000) authoritarian–libertarian cleavage. Lijphart (1999) considered all of these cleavages, although he adopted a slightly broader ideological dimension than the democratic–authoritarian cleavage considered here. The natures of the seven ideological cleavages are elaborated upon below. Examples of the types of issues likely to be associated with each are also provided.

The socioeconomic cleavage corresponds to Downs's left–right cleavage, Lipset and Rokkan's class cleavage, and Lijphart's cleavage of the same name as that used here. This ideological dimension concerns what Downs described as the proportion of economic activity left to the private as opposed to the public sector. As has been mentioned earlier in this thesis, most scholars have thought this to be the fundamental political conflict in the modern, industrialized world. By extension, it is concerned with equity in outcomes and/or opportunity, the battle between the 'haves' and 'have nots' in a society. The issues associated with this ideological dimension are likely to concern the welfare state (its expansion or retrenchment); organized labor; private property rights; state regulation of markets; trade regimes; economic growth; and productivity, to name a few.

The ethnic-cultural cleavage corresponds to Lipset and Rokkan's center-peripheral cleavage and to Lijphart's cleavage that is again known by the same name as that used here. It encompasses conflict over particularly sticky and descent-related traits such as language, culture, ethnicity, and race. The first three in particular are often closely intertwined. Language and cultural conflicts may revolve around different languages, literary traditions, and—to some extent—shared histories, a type of conflict that many scholars would describe as ethnic. An example is the conflict between the Flemish (Dutch-speakers) and Walloons (French-speakers) in Belgium. They may alternatively be of a less virulent form, encompassing dialectical and some literary, social, and historical differences. An example here is the conflict between the English, Scots, and Welsh in the United Kingdom, which scholars may or may not view as ethnic conflict. This class of political conflicts also includes racial conflict along the lines of the status of African-Americans in the United States, which many scholars would again view as ethnic, and non-racial ethnic conflict between descent groups not necessarily separated by language. An example of the latter is political conflict between the descendants of Turkish guest workers in Germany and individuals of German descent. The issues likely to be associated with this ideological dimension are myriad, from support for state programs designed to benefit particular racial, ethnic, or linguistic groups; the languages that are used in the public sphere; the linguistic content of educational curricula; immigration (its extent and nature); multiculturalism; discrimination on ethnic, racial, or linguistic grounds; and particular historical and cultural interpretations of a nation's identity.

The religious or church–state cleavage in Lipset and Rokkan's terms encompasses political conflicts related to the proper scope of religious activity and authority, especially in relation to the modern state. In Western Europe, this cleavage has historically been only of secondary importance to the socioeconomic cleavage and may have rivaled it in the late 19th and early 20th centuries (Lipset and Rokkan 1967), although scholars argue that it has been subsumed by other cleavages—notably the socioeconomic—in the post-war period (Inglehart 1984).[4] Issues likely to be associated with this cleavage are abortion;

[4]Kalyvas (1994), however, notes that Christian Democracy has been the most successful post-war political

support for traditional, religious morality; the presence of religious symbols in the public sphere, including educational facilities; state support for an 'established' church or churches; the teaching of religious beliefs in public schools; and state programs designed to benefit particular religious groups.

The foreign policy cleavage differs from the three cleavages discussed above in that it is much less sticky (i.e., non-sociological, in the parlance of the thesis). It has accordingly received less attention from comparative political scientists, particularly those identified with the voting behavior literature. Scholars such as Lipset and Rokkan do not consider this ideological dimension while others such as Lijphart, drawing upon the coalition theory literature, do. This ideological dimension of political conflict concerns a polity's relationship with the wider world. It is probably easiest to describe via the issues that relate to it, which include a militaristic or pacific approach to international relations; foreign aid; relations with particular countries; colonialism (such as the granting of independence to and relations with former colonies); involvement in conflicts abroad, particularly militarily; positions on key global issues such as arms control, drug trafficking, and terrorism; conflict over the polity's own boundaries with external actors; and membership in international or supra-national organizations such as the United Nations, NATO, and the European Union.

The urban-rural cleavage, originally propounded by Lipset and Rokkan, was viewed as especially relevant in polities in the late 19^{th} century. The accelerating pace of industrialization and the growth of world trade generated increasing strains between agricultural producers in rural areas and merchants and industrialists in urban areas. Most observers point to the decline of this cleavage over the course of the early 20^{th} century in Western Europe as countries attained full industrialization. The Scandinavian polities are a partial exception to this trend, where the cleavage remained relevant until the mid- 20^{th} century.[5] Today, this cleavage can be found in less developed polities that have not fully industrialized, both outside of Europe and in the newly-democratizing states of Eastern Europe. In the latter region, peasant parties have enjoyed reasonable success in the late 1990s. As Lipset and Rokkan (1967, 19) argue, "these are typical strains in all transitional societies." The ideological dimension of conflict between rural and urban lifestyles is associated with issues such as state support for farm subsidies; rural development; and land use policies.

The post-materialist cleavage frames political conflict between those who advocate traditional economic growth in a search for material security and those who are materialistically secure enough to trade off some economic welfare for improvments in the quality of life. Inglehart (1984) argues that this cleavage has recently emerged in advanced industrial democracies, which by the 1980s had achieved a level of prosperity and material security for their populations unprecedented in human history. Issues associated with this cleavage are most prominently environmentalism and anti-growth policies; less prominently, they include concern for democracy in organizations; support for culture and the arts; feminism; and pacifism.

Finally, the democratic–authoritarian cleavage may be found in polities that have recently experienced a transition to democracy from an authoritarian regime. An example is Spain's transition to democracy following the death of Franco in 1975. As Moreno (1999) and others hypothesize, tensions between supporters of the old and new regime is likely to

movement in Europe.

[5]See, for example, Swenson (1991) for a discussion of the 'red-green' coalitions in the 1930s that helped to usher in corporatism and the social democratic Scandinavian state.

persist until the transition is consolidated. That is, this cleavage should be relevant for only a limited period of time following a regime change: the salience of issues such as human rights, democracy, freedom, and the rule of law should spike within the first five to ten years or so and then decay. Lijphart (1999) discusses a broader cleavage that encompasses this one, which he calls 'regime support'. His cleavage includes debates over the legitimacy of regimes that are long-standing democracies, such as Italy. Since in these cases, the desire to overthrow an existing regime usually stems from one of the cleavages discussed above—in Italy's case, for example, from socioeconomics (bringing about a communist state)—or from non-partisan concern with government efficiency or stability, it seems sensible to limit the focus to that proposed here. Note that the democratic–authoritarian cleavage is only considered potentially salient in Greece, Portugal, and Spain. The four other countries in the sample that have experienced a post-World War II transition to democracy from an authoritarian regime—Germany, Austria, Italy, and Japan— do not show any evidence of the trend described here. For whatever reason, their transition to democracy seems a different class of phenomenon from the more recent ones.[6]

This brings us to the second operational decision. Having settled upon a set of cleavages that the comparative politics literature has viewed as important and for which we want to assess the relative salience in a country–election, the next task is to relate the issues featured in the Comparative Manifestos Project to the seven cleavages. That is, of the specific issue sets to which quasi-sentences of political party manifestos were assigned by the Manifesto Research Group and its successor, which issues or coding categories represent which cleavage? Two approaches are taken. The first is to assume that all sets of issues relate to cleavages similarly across space and time, i.e. to allow no country- or time-specific variation in the association of particular sets of issues with a cleavage. The second approach modifies the first, allowing for some country- and time-specific variation in the associations discussed below. As will hopefully become clear shortly, assuming a constant set of category–cleavage associations across both time and space is implausible: it does violence to what we know about particular countries at particular times and moreover is in conflict with the very goal of constructing a cross-sectional time-series measure.[7] Hence, measures derived from the method utilizing country–time specific associations are preferred to those derived from the method utilizing country–time invariant ones. The former are presented and discussed in the following section. The latter both serve as a robustness check for the more nuanced

[6]This observation dovetails well with the vast literature on democratization, which has traditionally divided its subject into three or four distinct phenomena or 'waves' on the basis of a perceived temporal and causal connection between cases; varying conceptualizations of the dependent variable; the types of explanation deemed relevant (e.g., actor- versus structurally-based arguments); and the specific independent variables employed. Germany, Austria, Italy, and Japan are viewed as second wave cases while Greece, Portugal, and Spain fall in the third. This literature contrasts the externally-imposed transitions to democracy of the former with the pacted, top-down transitions of the latter (e.g., Huntington 1991*b*, 583). For a broad overview of the 'wave' approach, see Huntington (1991*a*). The pre-eminent example of third wave scholarship is O'Donnell and Schmitter (1986) while McFaul (2002) has recently situated this approach in a broader context.

[7]Note, though, that even the country–time invariant method does allow for variation in the specific issues associated with cleavages across both countries and time. For example, in 1950s France, issues such as the proper scope of French military involvement in Algeria might be coded as either 'Military: Positive' or 'Military: Negative', while in the 1960s United States, issues related to the U.S.'s involvement in Vietnam might be coded as belonging to these same coding categories. In other words, since coding categories are themselves sets of issues related to a particular theme, the specific issues addressed in manifestos and coded as belonging to a category can vary.

measure and aid in evaluating coding bias that may have slipped in with the country–time specific modifications to the cleavage–coding category associations.

Beginning with the country–time invariant associations, which form the basis for the country–time specific ones, Table 4.2 lists the coding categories that this thesis views as reflecting each of the seven ideological cleavages underlying political competition. A brief description of each category is included in the table. These issue categories have been grouped together on theoretical grounds *exogenous to the data*. A similar approach has been taken by others (e.g., Budge et al. 2001). Empirical support for some of the theoretically-driven associations is provided by past factor analyses, which have found, for example, that a reasonable number of the socioeconomic coding categories load onto a single dimension (e.g., Budge and Laver 1992).[8] Regardless, the association of most categories with one of the seven cleavages should be reasonably uncontroversial, such as 'Market Regulation' with socioeconomics and 'Multiculturalism: Positive' with culture–ethnicity. Others seem less so, such as the association of 'Decentralization' and 'National Way of Life: Negative' with culture–ethnicity. A few comments follow below about some potentially controversial and problematic decisions.

'Decentralization' and 'Centralization' are viewed as issues associated with the cultural–ethnic cleavage because many ethnic and linguistic conflicts are characterized by geographically concentrated groups, e.g. the Francophone population in Canada. Demands for more local autonomy, whether in the form of decentralization or explicit federalism, quite frequently reflect tension between such groups. It is of course likely that in some cases these issues reflect concerns about government efficiency instead of a cultural–ethnic cleavage; however, there is little that can be done to disentangle the two. Likewise, appeals to established national ideas, opposition to the existing national state, and nationalism in general—issues coded as belonging to the 'National Way of Life: Negative' and 'National Way of Life: Positive' categories—are most likely associated with the cultural–ethnic cleavage. It is reasonable to expect to find party manifestos containing such appeals in countries with a history of linguistic conflict such as Belgium and Canada. However, it is also possible that these issues are associated with the foreign policy cleavage. If a people's (nation's) existence is perceived as threatened by external actors, as in Greece and Israel, similar appeals might have a very different meaning. One of the country–time modifications that is made to the issue associations presented in Table 4.2 is to allow the 'National Way of Life' categories to associate with the foreign policy cleavage in polities for which our knowledge suggests this is the most reasonable of the two possible associations. Such modifications will be discussed in greater detail later in the section.

A final problematic set of categories is 'Social Justice', 'Multiculturalism: Positive', 'Multiculturalism: Negative', 'Underprivileged Minority Groups', and 'Non-Economic Demographic Groups'. The 'Social Justice' category relates primarily to equality in resources and opportunities (Budge et al. 2001, Appendix III) but also includes sentences related to racial discrimination. The former should be associated with the socioeconomic cleavage,

[8] Budge and Laver (1992) found that many of the socioeconomic categories in addition to 'Traditional Morality', some foreign policy categories ('Anti-imperialism', 'Military: Positive', 'Military: Negative', 'Peace', and 'Internationalism'), 'Democracy', 'Freedom and Human Rights', 'Law and Order', 'Social Harmony', and 'National Way of Life: Positive' loaded onto one dimension using Manifesto Research Group data through 1983. Although it may indeed be the case that the socioeconomic, foreign policy, religious, and cultural–ethnic cleavages overlap in this manner, the thesis resists assuming that they do, particularly in light of the fact that the Budge and Laver analysis was conducted over all countries.

Code	Description	Code	Description	Code	Description
Socioeconomics		**Cultural/Ethnic**		**Foreign Policy**	
PER401	Free enterprise	PER301	Decentralization	PER101	Foreign Special Relationships, Positive
PER402	Incentives	PER302	Centralization	PER102	Foreign Special Relationships, Negative
PER403	Market Regulation	PER601	National Way of Life, Positive	PER103	Anti-imperialism
PER404	Economic Planning	PER602	National Way of Life, Negative	PER104	Military, Positive
PER406	Corporatism	PER607	Multiculturalism, Positive	PER105	Military, Negative
PER407	Protectionism, Positive	PER608	Multiculturalism, Negative	PER106	Peace
PER408	Protectionism, Negative	PER705	Underprivileged Minorities	PER107	Internationalism, Positive
PER409	Keynesian Demand Management	PER706	Non-economic Demographic Groups	PER108	EC/EU, Positive
PER410	Productivity			PER109	Internationalism, Negative
PER411	Technology & Infrastructure	**Religious**		PER110	EC/EU, Negative
PER412	Controlled Economy	PER603	Traditional Morality, Positive	**Democratic–Authoritarian**	
PER413	Nationalization	PER604	Traditional Morality, Negative	PER201	Human Rights & Freedom
PER414	Economic Orthodoxy	**Post-materialist**		PER202	Democracy
PER415	Marxist Analysis	PER416	Anti-Growth	**Urban–Rural**	
PER503	Social Justice	PER501	Environment	PER703	Agriculture & Farmers
PER504	Welfare State Expansion				
PER505	Welfare State Limitation				
PER506	Education Expansion				
PER507	Education Limitation				
PER701	Labor Groups, Positive				
PER702	Labor Groups, Negative				
PER704	Middle Class & Professional Groups				

Table 4.2: The coding categories from the Comparative Manifestos Project 2001 data set that are taken as representing each of the seven particized ideological cleavages.

given its definition here; however, the latter should be associated with the cultural–ethnic cleavage. Unfortunately, little can be done to parcel out the racial discrimination-related sentences from the others short of re-coding the manifestos, which is not a feasible option for this thesis. One or the other association must be chosen for the sentences coded as belonging to this category. Because the plurality of issues subsumed by the category relate to socioeconomics, socioeconomics is chosen here. Accordingly, the salience of the cultural–ethnic cleavage may be underestimated. Similarly, the 'Multiculturalism' categories relate to cultural diversity; communalism; pillarization; and the preservation of autonomy of religious and linguistic heritages (Budge et al. 2001, Appendix III). They mostly tap the cultural–ethnic cleavage but to some extant overlap with the religious cleavage. As before, there is nothing that can be done to break out the issues related to the two cleavages. The categories have again been associated with the plurality cleavage, in this case culture–ethnicity, which means that the salience of the religious cleavage may be underestimated. The same story holds for the 'Non-Economic Demographic Groups' and 'Underprivileged Minority Groups' coding categories, which collect sentences related to both the religious and cultural–ethnic cleavages, although the latter are in the majority.

Before delving into country- and time-specific modifications to the associations presented in Table 4.2, readers might well ask which Comparative Manifestos Project coding categories have not been used. The answer is eight: 'Constitutionalism: Positive'; 'Constitutionalism: Negative'; 'Government Efficiency'; 'Corruption'; 'Social Harmony'; 'Political Authority'; 'Culture'; and 'Law and Order'. Note that the 'Democracy' and 'Freedom and Human Rights' categories are not considered relevant for the polities that did not undergo a recent transition to democracy (e.g., all except Greece, Portugal, and Spain) with one exception that is discussed later. These categories are reasonably salient in most of these polities except for the Anglo-Saxon democracies.[9] If these two categories were to be associated with a cleavage, it would likely be the foreign policy cleavage; however, because the theoretical argument is not clear, these categories are ignored. Unambiguously associating the other eight categories with a cleavage is difficult due to the Comparative Manifestos Group's coding methodology: many arguably distinct issues are lumped together in one category. Most, though, may be considered valence issues. Brief elaborations follow.

The category 'Social Harmony' does not seem discernibly related to any of the seven cleavages of interest to this thesis. It seems a shoe-in for a set of valence issues. The 'Culture', 'Political Authority', and 'Law and Order' coding categories might be viewed as related to either the post-materialist or the cultural–ethnic cleavages. However, it is not clear from theory that even this should always be the case. 'Political Authority', for example, may reflect government efficiency concerns as in Italy, where a long succession of unstable governments finally led to a reform of the electoral system in 1994. This coding category, in fact, is not used with two exceptions due to its very uncertain theoretical status, which may lead to the underestimation of post-materialist cleavage salience.[10] 'Law and Order'

[9] For example, the average percentage of a party manifesto devoted to the 'Democracy' category in Sweden is 3.7% and to the 'Freedom and Human Rights' category 2.7%.

[10] Particularly troublesome with respect to this category are the polities of Finland, France, Greece, Iceland, Ireland, and Switzerland, all of which have moderate to reasonable correlations between 'Political Authority' and the environmental categories ($0.20 < r < 0.40$) and where the category is of high salience. This category is also of moderate to high salience in Australia, Italy and Germany, although in these three polities there is little correlation between it and the environmental categories. Political parties in these two groups of polities devote substantial proportions of their manifestos to this set of issues. For example, the maximum

seems less ambiguous than 'Political Authority' but could still be associated with either post-materialism or culture–ethnicity by a reasonable person. The latter association, for example, might be motivated by the growing resentment of immigration in some West European countries such as the Netherlands, a by-product of which is the native-born Dutch blaming immigrants for crime. 'Culture' includes both general support for the arts, arguably a post-materialist issue, and support for 'cultural' (presumably ethnic or linguistic group-specific) mass media, arguably a cultural–ethnic issue. The first approach that does not allow time- or country-specific modification of category–cleavage associations accordingly errs on the side of caution and does not include suspect categories such as these when calculating the salience of the seven cleavages. Country-specific modifications sometimes associate these categories with the post-materialist cleavage and sometimes with the cultural–ethnic cleavage, as will be discussed shortly. Moving on to the final four categories, the two Constitutionalism categories, 'Government Efficiency', and 'Corruption' all seem to tap a non-partisan concern for good government. These potential valence issues do not seem relevant to this thesis.[11] A possible exception to this argument concerns 'Government Efficiency', which—as a result of its including issues such as the paring down of bureaucracy, a de facto limitation on the size of government—may tap the socioeconomic cleavage. Another possible exception is the two Constitutionalism categories, which may be associated with the cultural–ethnic or foreign policy cleavages where such conflicts revolve around provisions enshrined in a constitution, e.g. Quebequois separatism in Canada.

Country- and time-specific modifications to the associations in Table 4.2 were introduced to address some of the ambiguous associations discussed above. They are summarized in Table 4.3. For the most part, as will be discussed below, theory has dictated the revised associations. That is, the coding associations are again exogenous to the data. The exceptions to this approach primarily concern the two categories of 'Law and Order' and 'Culture', where the data has been allowed to speak. Other exceptions where country- and/or time-specific empirical correlations were allowed to aid in the association of coding categories with cleavages are noted in the discussion that follows.

For Greece, Germany, Ireland, the United States, and Israel, the two 'National Way of Life' coding categories were associated with the foreign policy instead of the cultural–ethnic cleavage. For France and Austria, the same association was made through 1982 and 1980, respectively. In all of the polity–elections where the 'National Way of Life' categories were associated with the foreign policy cleavage, nationalism was promoted in response to external events or actors, from the Cold War (the U.S., Germany, and Austria) to the struggle for Northern Ireland (Ireland) to the Algerian crisis (France) to the Arab–Israeli conflict (Israel) to relations with Turkey (Greece). For post-1982 France, the 'National Way

salience of the category to a party in Iceland is 72% and in Finland 47%, outliers by any standards, and the mean salience in these two polities is 13% and 9%, respectively. I can only make rough guesses as to why this set of issues features so prominently in a few of these polities. In France, the salience of political authority from 1945–60 likely relates to the instability and ineffectiveness of government under the Fourth Republic. In Italy, the salience's peak in the late 1980s and resurgence in the late 1990s corresponds both to efforts to fight organized crime and to periods of government instability. In Germany, the category's peak in the 1960s and its moderate correlations with foreign policy categories suggest it may be related to the Cold War.

[11] Perhaps not surprisingly, these sets of issues are of high salience in polities such as Greece, Italy, and Japan and of lesser but still moderate salience in Belgium, Iceland, Ireland, Israel and Switzerland. In Austria, Canada, Germany, the Netherlands and Portugal, the salience of these issues increased sharply in the late 1980s.

Polity	Foreign Policy	Culture/Ethnic	Post-materialism
Australia		+ Culture	
Austria	+ National Way of Life: Pos (< 1/1/80) + National Way of Life: Neg (< 1/1/80)	− National Way of Life: Pos − National Way of Life: Neg	+ Political Authority + National Way of Life: Pos (> 1/1/80) + National Way of Life: Neg (> 1/1/80)
Belgium		+ Law & Order (> 1/1/60) + Culture + Constitutionalism: Pos + Constitutionalism: Neg	
Canada		+ Constitutionalism: Pos + Constitutionalism: Neg	
France	+ National Way of Life: Pos (< 1/1/82) + National Way of Life: Neg (< 1/1/82)	− National Way of Life: Pos (< 1/1/82) − National Way of Life: Neg (< 1/1/82) + Law & Order (> 1/1/60) + Culture	
Germany	+ National Way of Life: Pos + National Way of Life: Neg	− National Way of Life: Pos − National Way of Life: Neg	
Greece	+ National Way of Life: Pos + National Way of Life: Neg	− National Way of Life: Pos − National Way of Life: Neg	+ Culture
Ireland	+ National Way of Life: Pos + National Way of Life: Neg	− National Way of Life: Pos − National Way of Life: Neg	
Israel	+ National Way of Life: Pos + National Way of Life: Neg + Freedom & Human Rights + Political Authority + Democracy	− National Way of Life: Pos − National Way of Life: Neg	
Italy		+ Culture	
Japan	+ Constitutionalism: Pos + Constitutionalism: Neg	− Centralization − Decentralization	
Luxembourg		+ Law & Order (> 1/1/60) + Culture	
Netherlands		+ Culture	
New Zealand		+ Law and Order	
Norway		+ Culture	
Portugal		+ Culture	
Spain		+ Culture + Law & Order (> 1/1/60)	
Switzerland		+ Law & Order (> 1/1/60) + Culture	
UK		+ Law & Order (> 1/1/60)	+ Culture
US	+ National Way of Life: Pos + National Way of Life: Neg	− National Way of Life: Pos − National Way of Life: Neg + Culture	

Table 4.3: Country and time-specific modifications to the coding category– particized ideological cleavage associations presented in Table 4.2.

of Life' categories were associated with the cultural–ethnic cleavage since they have been taken up by the Front Nationale and correlate with anti-multiculturalism, law and order, and social group issues. For post-1980 Austria, they were associated with the post-material cleavage as a result of Green parties and the Freedom Movement putting them on the table and their correlation with environmentalism during this period.

'Culture' is associated with either the post-materialist or the cultural–ethnic cleavage depending upon the strength of its correlation with the coding categories already associated with these cleavages. Countries where this coding category reasonably correlates ($r > 0.30$) with one of the two environmental categories are Portugal, Greece, the United Kingdom, and Norway. However, in both Portugal and Norway, 'Culture' correlates more strongly with the cultural–ethnic coding categories and accordingly is only associated with post-materialism for Greece and the United Kingdom. Other polities where 'Culture' reasonably correlates ($r > 0.30$) with at least two of the cultural–ethnic coding categories are Australia, France, Italy, Luxembourg, Spain, Switzerland, and the United States. For these polities, Norway, and Portugal, 'Culture' is associated with the cultural–ethnic cleavage.[12] The 'Culture' category is not used for the remaining polities, including some—Austria, Germany, Ireland, and France—where it is of high salience. Again, the desire here is to err on the side of caution and to not include categories for which a cleavage affiliation is particularly dubious.

Similarly, where the 'Law and Order' coding category is reasonably correlated ($r > 0.30$) with at least two other cultural–ethnic coding categories, it is associated from 1960 onward with the cultural–ethnic cleavage. The reason for starting the association in 1960 is that law and order issues feature prominently in several countries such as the Netherlands, Denmark, and Switzerland immediately following World War II for reasons unrelated to any of the seven cleavages. Polities for which this association is made are the Netherlands, Switzerland, Luxembourg, New Zealand, Spain, the United Kingdom, Belgium, and France. This coding category is not used for the remaining countries, including three countries (Ireland, the United States, and Italy) where it is of reasonable salience. Note that the 'Law and Order' category is reasonably correlated with one of the two environmental categories in the United Kingdom, New Zealand, and Belgium. Because it has more and/or stronger correlations with the cultural–ethnic categories in these countries, however, it is associated with culture–ethnicity for them as mentioned above.

Finally, a few idiosyncratic associations. Japan is recognized as being one of the most culturally and ethnically homogeneous societies in the world. Accordingly, the rapid increase in the salience of the coding categories 'Centralization' and 'Decentralization' in the 1980s does not seem to signal a rise in cultural–ethnic conflict. These categories correlate with other good government categories, which also rapidly increase in salience during this same period. Their association with the cultural–ethnic cleavage is removed as a result of these observations. Conversely, 'Constitutionalism: Positive' and 'Constitutionalism: Negative' almost certainly reflect concerns over Japan's place in the world, especially militarily (the constitution enshrines the principle of pacifism except in self-defense). These two categories are consequently related to the foreign policy cleavage. In Israel, 'Politi-

[12]Surprisingly, when pooling over time in Belgium, the 'Culture' coding category does not correlate strongly with the other cultural–ethnic cleavage coding categories despite its salience peaking in the 1970s along with other indicators of ethnic conflict. Nevertheless, due to theory, its peak in the 1970s, and strong correlations with the social groups coding categories *around this period*, it is associated with the cultural–ethnic cleavage.

cal Authority', 'Democracy', and 'Freedom and Human Rights' must be viewed as associated with the foreign policy cleavage: they reflect the concerns of Israel's Jewish citizens regarding the treatment of Palestinians in the occupied territories on the one hand and the Israeli state's need to respond forcibly and effectively to acts of 'domestic' terrorism as well as to defend the only Jewish democracy in the world against external threats on the other. In Canada, 'Constitutionalism: Positive' and 'Constitutionalism: Negative' reflects the linguistic–ethnic conflict due to Quebequois demands for independence or greater autonomy, which necessitates altering the constitutionally-mandated federal–province relationship. Similarly, in Belgium, tensions between linguistic groups have resulted in revisions in the country's political structure and constitution, so it is only logical to suppose that the two 'Constitutionalism' categories should be associated with the cultural–linguistic cleavage. Finally, in Austria, issues related to the coding category of 'Political Authority' have been the hallmark of the Freedom Movement and its neo-Nazi ideology; hence, this category is associated with post-materialism in Austria.

These operational decisions out of the way, we can now turn to the broader subject: how to convert the Comparative Manifestos Project data on the salience of coding categories into a measure of the particized ideological space. Using each of the two sets of coding category–cleavage associations described above, one country-time invariant and the other country–time specific, the salience of the seven potential particized cleavages for a country–election is calculated using the following simple procedure. In an election, the number of sentences a party devotes to a cleavage is the sum of the sentences belonging to the coding categories associated with the cleavage, as expressed in either Table 4.2 or Table 4.3. The country–election total number of sentences devoted to a cleavage is the sum (over all parties competing in a country–election) of the number of sentences parties devote to the cleavage. The country–election *salience* of the cleavage is then the total number of country–election sentences devoted to the cleavage divided by the grand total number of country–election sentences, i.e. the sum (over all parties competing in a country–election) of the number of sentences in parties' manifestos.

That is, let $s_{i,j,k}$ represent the number of sentences in coding category $i = 1, \ldots, m$ for party $j = 1, \ldots, n_k$ at country–election $k = 1, \ldots, q$, and let $C_{k,\ell} \subset \{1, \ldots, m\}$ be the set of coding categories related to the cleavage $\ell = 1, \ldots, 7$ at a country–election k.[13] Then the number $S_{k,\ell}$ of sentences in country–election k devoted to the ℓth cleavage is

$$S_{k,\ell} = \sum_{j=1}^{n_k} \sum_{i \in C_{k,\ell}} s_{i,j,k} \ .$$

Letting $t_{j,k}$ represent the total sentences in the manifesto of a party j in country–election k, the grand total number of country–election manifesto sentences, T_k, is then

$$T_k = \sum_{j=1}^{n_k} t_{j,k}$$

and the country–election salience of the ℓth cleavage, $R_{k,\ell}$, is given by

$$R_{k,\ell} = \frac{S_{k,\ell}}{T_k} \ .$$

[13]Note, for example, that $C_{k,\ell} \cap C_{k,\ell'} = \varnothing$ for $\ell \neq \ell'$ because each coding category is associated with at most one cleavage ℓ for a country–election k.

The country–election salience of a cleavage, in other words, is the proportion of the combined manifestos of the parties competing in a country–election that is devoted to the cleavage.

Note a crucial difference between this procedure and Nyblade's (2004), who weights each party's contribution by its vote share. The most important reason for breaking with Nyblade is the desire to keep the ideological spaces of voters and parties separate. One of the ultimate goals of the thesis is to compare the two spaces and see where they differ. A secondary reason raised in Chapter 2 is that this procedure seems to overly discount the contribution of small parties to the ideological space. Parties may not garner large numbers of votes but may still be important political players, at least as long as their vote share is reasonable (not, say, 0.2%). As was also pointed out Chapter 2, all parties included in the Comparative Manifestos Project satisfy this criterion. In fact, if anything, too many small parties have not been included in the project, leading to over-representation of the mainstream set of issues and hence mainstream ideological cleavages.

An extended example may illustrate. Three small religious parties in the Netherlands that are not included— the Political Reformed Party (*Staatkundig Gereformeerde* SGP), the Reformed Political Federation (*Reformatorische Politieke Federatie*), and the Reformed Political Union (*Gereformeerd Politiek Verbond* GPV)— garner about 2%, 2%, and 1.5% of the vote, respectively. In 1998, the latter two merged to form the Christian Union (*ChristenUnie*). Despite their small vote shares, these parties occasionally play an important role in politics, such as in the most recent (spring 2003) set of coalition negotiations, and represent the declining but still present influence of religion in Dutch politics. The small Dutch Socialist party is also not included, which has recently experienced growing popularity (from 0.4% of the vote in the 1989 election to 6% in the most recent elections in 2003). Another example is the United States. No doubt because most of the the polities included in the Comparative Manifestos Project are parliamentary, presidential third parties—party or candidate labels that exist at the presidential but not the legislative level—are not analyzed. While the United States does have an almost perfect two party system in legislative electoral contests throughout the post-war period, this is not the case for presidential elections, where third party (often independent) candidates frequently both run and manage a respectable showing. Many of these candidates have had a substantial impact on the political agenda in the United States, regardless of their vote share.

We now have a measure of cleavage salience in a country–election. One of the goals of this section, determining the nature of the particized cleavages in a country, is achieved by simply looking at the relative salience of the seven potential cleavages. It is as simple as it seems: the cleavages with reasonable levels of salience are the relevant cleavages in a country. For example, take a country where the salience of the seven potential cleavages is as follows. The socioeconomic cleavage has the highest salience, followed not-so-closely behind by the cultural–ethnic cleavage. All other cleavages have negligible levels of salience. In this case, we might say that the polity has two relevant cleavages, socioeconomics and culture–ethnicity, although the socioeconomic cleavage is the dominant one. Relatedly, we can track changes in the nature of a polity's ideological cleavages over time—the rise of a new cleavage such as post-materialism and the decline of older cleavages such as religion—by assessing changes in salience over time. In the example described above, if the salience of socioeconomics begins to decline in the 1980s and the salience of the post-materialist cleavage, close to 0% prior to the 1980s, begins a slow but steady increase thereafter, we might describe the ideological space as being altered by the replacement of an old ideological

dimension with a new.

The second goal of the chapter is a measure of the dimensionality of the ideological space. In the example discussed above, we impressionistically judged which cleavages were relevant and thus impressionistically assessed the dimensionality of the ideological space. However, this method leaves too much of a burden on the analyst. First, such an impressionistic approach is time-consuming as the analyst must make an assessment for each country–election. Second and more importantly, it is difficult to decide how to weight the various cleavages, which opens the analyst to charges of coding bias and will produce an unreliable measure. Again turning to the brief example discussed above, if the salience of the socioeconomic cleavage hovers between 50% and 60% over time and the cultural–ethnic cleavage between 20% and 25%, we surely want to describe the dimensionality as greater than 1. But how much greater? How do we weight the less salient but still relevant cultural–ethnic cleavage? As 1/2 of the socioeconomic cleavage, yielding a dimensionality of 1.5? As 1/3, yielding a dimensionality of 1.3? Or do we discard the cultural–ethnic cleavage entirely because the socio-economic cleavage is so dominant, yielding a dimensionality of 1?

Fortunately, many measures exist to make just these kinds of decisions automatically, most prominently the much-discussed N—the effective number measure—from Chapter 2. However, one problem with N is that it tends to over-count the largest of the items being weighed, whether the items are parties or cleavages and the sizes of the items are measured as vote shares or salience, respectively (Molinar 1991). Accordingly, Molinar proposed a modification of N, which he called NP. For our purposes, this alternative summary measure takes the following form:

$$NP_k = 1 + N_k \frac{\left(\sum_\ell R_{k,\ell}^2\right) - \max_\ell R_{k,\ell}^2}{\sum_\ell R_{k,\ell}^2} \ ,$$

where $R_{k,\ell}$ is the salience of the ℓth cleavage for the kth country–election as before. Of course, N_k is the effective number of cleavages for the kth country–election, calculated as described in Chapter 2 with cleavage salience substituted for population share, i.e.

$$N_k = \frac{1}{\sum_\ell R_{k,\ell}^2} \ .$$

Both N and NP are used here as summary measures to weight the cleavages by their salience, thereby providing estimates of the dimensionality of the ideological space.

A third summary measure is inspired by Lijphart (1999), whose approach was criticized for its lack of reliability in Chapter 2. As the reader may recall, Lijphart does simply impressionistically weight the relative salience of the various cleavages to arrive at an estimate of dimensionality: high salience cleavages are assigned a score of 1, medium salience cleavages a score of 0.5, and low or no salience cleavages a score of 0. The dimensionality of the ideological space is then given by the sum of the scores over the cleavages. Automating Lijphart's procedure is accomplished by counting the most salient cleavage as one dimension. Other cleavages are counted as equally salient (as a second, third, or fourth, etc. dimension) if the ratio of saliences is greater than or equal to 2/3, where the salience of the dominant cleavage appears in the denominator of the fraction. Similarly, less salient cleavages are counted as 1/2 a cleavage if the ratio of the saliences falls in the interval $[1/3, 2/3)$. That is, the dimensionality is calculated as follows.

1. Let $M_k = \max(R_{1,k}, \ldots, R_{7,k})$ be the salience of the dominant cleavage (the maximum salience) in a country–election k.

2. Calculate the ratio of the salience of the ℓ^{th} cleavage to the maximum salience in a country–election k, $Z_{k,\ell}$, for each cleavage,

$$Z_{k,\ell} = \frac{R_{k,\ell}}{M_k} \ .$$

3. Assign a score, $X_{k,\ell}$, to each cleavage in the set of cleavages as follows:

$$X_{k,\ell} = \begin{cases} 1 & \text{if } Z_{k,\ell} \in [2/3, 1] \\ 0.5 & \text{if } Z_{k,\ell} \in [1/3, 2/3) \\ 0 & \text{otherwise} \end{cases} \ .$$

4. The dimensionality of the ideological space for a country–election, D_k, is then

$$D_k = \sum_{\ell=1}^{7} X_{k,\ell} \ .$$

This approach is used in addition to N and NP as a summary measure of dimensionality and denoted NL.

Many variations on the approach outlined above are possible. For example, the break points of 2/3 and 1/3 are necessarily somewhat arbitrary: it would be hard to argue against alternative choices of, say, 3/4 and 1/2 or 1/2 and 1/4. One could instead view step three as

$$X_{k,\ell} = \begin{cases} 1 & \text{if } Z_{k,\ell} \in [a, 1] \\ 0.5 & \text{if } Z_{k,\ell} \in [b, a) \\ 0 & \text{otherwise} \end{cases} \ ,$$

where $a, b \in (0, 1)$ and $a > b$, substituting any values for a and b that meet these conditions. For example, one might set $a = 0.75$ and $b = 0.5$. One could also add a fourth value that $X_{k,\ell}$ takes, e.g. 0.25, and establish a fourth condition accordingly. However, the alternative $a = 1/2$ and $b = 1/4$ seems a little too generous in the weight given to the second and third most salient cleavages while the alternative $a = 3/4$ and $b = 1/2$ seems too stingy. Setting $a = 2/3$ and $b = 1/3$ simply seems the most sensible choice, which is why these parameter values are used here. Regardless, the results presented in the next section are not terribly sensitive to the values chosen, within reason.

Two final comments about this operationalization seem in order. First, an unfortunate by-product of the thesis's approach to the particized preferences variable is an inability to discriminate between orthogonal and overlapping (non-orthogonal) cleavages. Without different data, there does not seem to be a way to get around this problem. Principal components and factor analysis can determine orthogonality but require more observations than the Comparative Manifestos Project contains for each polity–election. The usual advice offered in such situations is to gather more data. However, there is not much room for increasing n from within the Comparative Manifestos Project research design: not enough small parties are excluded from the Project that their incorporation would alter the set of uses to which the data could be put. Ultimately, the sample size is constrained by the

research design itself. In the greater scheme of things, the fact is that only a small number of relevant (non-marginal) political parties compete in elections. Short of pooling across time and/or space, a sufficient sample size for the use of data-driven statistical techniques such as principal components analysis can only come from a new research design such as a survey of political elites. Consequently, the estimates presented in the following section may overestimate dimensionality. For example, the religious and socio-economic cleavages may not be orthogonal in the 1980s and 1990s but overlapping as Inglehart has argued; the methodological approach adopted here, however, does not allow the evaluation of this argument.

Second, the number of countries included in the Comparative Manifestos Project is smaller than we would ideally like (twenty-four) and the sample is limited to advanced industrial democracies. This, too, is unfortunate but ultimately possible to remedy from within the existing research design. Some day scholars will no doubt extend the Project to other polities; for the time being, however, we will have to make do with the data that we have.

4.1.2 The Nature and Number of Particized Cleavages Across Time and Space

How does the particized ideological space vary across polities and time? A first answer to this question may be found in graphs that plot the estimated salience of the seven potential cleavages over time in each of the twenty-four polities analyzed. For example, Figure 4.1 shows cleavage salience for Israel from 1945–98, which is calculated using the country–time variant approach described in the prior section. Note that the democratic–authoritarian cleavage is not considered potentially relevant, as discussed earlier. Although it could have been plotted with a salience of 0% for all elections, it is not shown to simplify the graph. Note also that the LOWESS smoother is applied to the data prior to plotting to help bring out trends in salience over time.[14]

Continuing momentarily with this example, it should be apparent from Figure 4.1 that the dominant particized ideological cleavage in Israel is the foreign policy cleavage. It is the most salient cleavage throughout the post-war period save for intervals in the mid-1950s and the 1990s. Further, from roughly 1960 to 1990, the difference in salience between it and the second most salient cleavage, socioeconomics, is not trivial: the mean difference during this period is approximately 20 percentage points. Nevertheless, the relevance of the two cleavages are on the same scale of magnitude: both appear to be important conflicts underpinning political competition in Israel. One would certainly be tempted to conclude that the particized ideological space in Israel is at minimum two-dimensional on average throughout the post-war period. One can also see from this graph that conflicts around

[14]LOWESS is a non-parametric smoother. Developed by Cleveland (1979), robust locally weighted regression obtains a smoothed value of salience at election number t as follows. An interval containing f percent of the data points is constructed around t and a linear regression using weighted least squares is fitted to all of these points. Weights are chosen to down-weight both points further from t and outliers, the latter iteratively. Note that here, the response variable is salience and the predictor variable is the election number, $t = 1, 2, \ldots, n$, not the date of the election. The predicted value from this regression at $T = t$ is taken as the smoothed value. Throughout the section, the percentage of data points used by the LOWESS smoother is 1/3. Although a good default choice is 2/3, this produced plots that were too smooth. Estimation was performed using the `lowess` function in `R`.

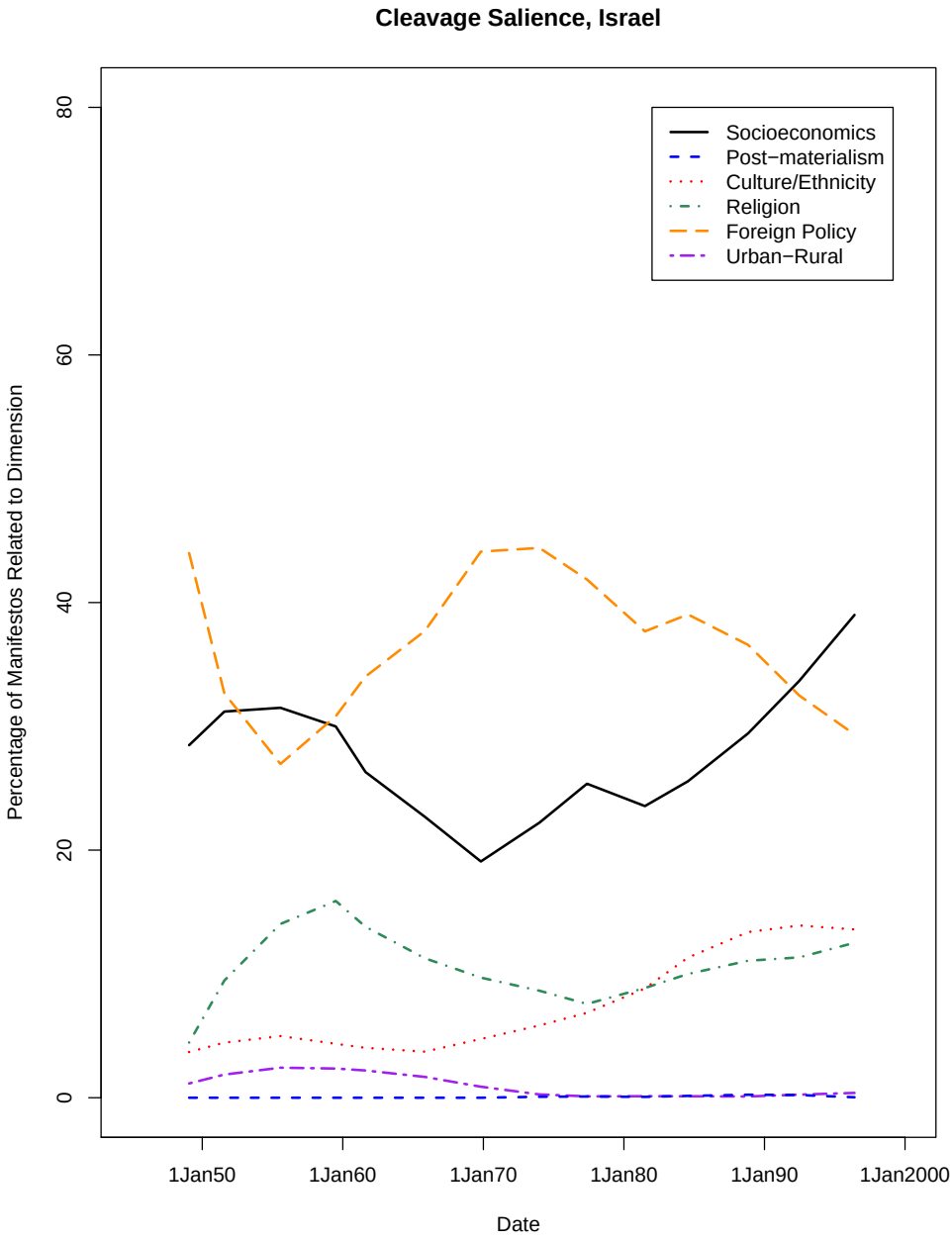

Figure 4.1: The salience of the six particized ideological cleavages potentially relevant in Israel from 1945–98. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3.

both religion and ethnicity are present, although these conflicts are less important than the socioeconomic and foreign policy conflicts. The salience of religion appears to have peaked about 1960, declined somewhat until 1980, and from 1980 onwards to have slowly begun to increase in relevance, although without attaining a comparable salience to its heyday. Cultural–ethnic conflict displays a different pattern, a steady increase that accelerates in the late 1980s and early 1990s. The other two potential ideological cleavages play little role in Israeli politics: the initially marginal urban–rural conflict withered away completely by the 1970s and post-materialism, not surprisingly, has practically no salience throughout the period.

These results for the most part are reassuring in that they confirm the very general expectations we have about the particized ideological space in Israel. Certainly, we would have grounds to doubt either the methods proposed in this thesis or the Comparative Manifestos Project data (or both!) if they led us to conclude that foreign policy has had little or no relevance in Israeli politics. Similarly, it would be surprising if we concluded religion and ethnicity had not played a role.[15] On the other hand, if the measure only confirmed what we already knew, it would not be terribly interesting. In this situation, we might suspect that we had leaned too heavily on the data, so to speak, with theory. Happily, some intriguing puzzles do present themselves. For example, why was foreign policy so much less important a cleavage in Israeli politics in the 1950s? Israel's Arab neighbors were all sworn to its destruction during this period and it joined the ex-colonial powers of Britain and France in staging an invasion of Egypt in 1956 (the Suez Crisis).[16] Certainly, given the objective security situation in which Israel found itself, the low salience of the cleavage signifies agreement among the parties concerned about the proper manner in which to deal with the various foreign policy crises that confronted them. But why did such a consensus exist during this period and not others when the security situation was equally grave? This is an intriguing question for any student of Israeli politics. Further, why did the salience of the religious cleavage decline from 1960 to 1980? It is surprising that religion is not more salient throughout the period (and particularly today) in light of the portraits painted by the Israeli politics literature.[17]

This extended example has hopefully served to illustrate how the nature of the political conflicts in a country can be easily identified using data on cleavage salience, which is calculated from the Comparative Manifestos Project data set as described in the previous section. Accordingly, Figures 4.2–4.7 plot the salience of the six (or seven, in the case of

[15]It is particularly reassuring to see an increased saliency in ethnic conflict in the late 1980s–early 1990s. Not coincidentally, Israel experienced a 7% increase in population in the 2.5 year period from September 1989 to March 1989 due to the influx of a linguistically and culturally distinctive group, Soviet Jewish emigrees (Fein 1995, 162). The Israeli politics literature has been rife with claims about the impact of these demographic changes, e.g. "...this immigration will probably alter the basic profile of Israel's political and social structure..." (Kimmerling 1999, 39), which the data nicely confirm have a basis in reality.

[16]Polk (1991, 203) goes so far as to describe Israel's security situation in the early 1950s as follows: "Peace, indeed, had never really come to the Middle East. Despite the armistice of the Spring of 1949, the borders of Israel were fronts rather than frontiers. Raids and counterraids, intelligence probes, commando attacks... were the order of the day, almost every day."

[17]Nachmias and Sened (1999, 271) argue that the two most central cleavages in Israeli politics are national security and the secular–religious split. One potential explanation for the religious cleavage's lower than expected salience is that the cultural–ethnic cleavage is picking up some aspects of religious conflict. As discussed in the prior section, both religious and ethnic issues are unfortunately included in coding categories such as 'Non-Economic Demographic Groups'. Still, however, one wonders.

Greece, Portugal, and Spain) potential particized ideological cleavages in the twenty-four polities studied. The salience in all of these plots is calculated using the country–time specific method.[18] The line types and colors correspond to the same cleavages as in Figure 4.1. A LOWESS smoother is applied to the data in order to bring out trends over time more clearly, again as in Figure 4.1. A few comments about the nature of the particized ideological space in these countries as revealed by the plots are in order, although this is not the place for a detailed country-by-country discussion.

First and foremost, empirical support is once again provided for the widespread belief among comparativists, at least among the subset of comparativists who study advanced industrial polities, that the predominant political conflict is socioeconomic (e.g., Budge, Robertson and Hearl 1987). Out of the twenty-four countries analyzed in the post-war period, the salience of the particized socioeconomic cleavage is outstripped by another cleavage in only four countries: Belgium, Greece, Israel, and Portugal. In Greece and Portugal, the eclipse is transitory: the democratic–authoritarian cleavage overshadows the socioeconomic in one election, the first following the transition to democracy. In Belgium, socioeconomics takes second place to cultural–ethnic conflict for fifteen years (from 1961 to 1974), although the latter persistently lurks in the wings for the remainder of the post-war period.[19] In Israel, foreign policy consistently outranks socioeconomics, as discussed above, a result not surprising to those familiar with Israel's history. It is true that there are a few other countries where the preeminence of socioeconomics is challenged: in the U.S., France, Germany, and Japan by foreign policy; in Austria by post-materialism; and in Canada by culture–ethnicity. Further, a few countries are on a trend in the 1990s for another cleavage to overtake socioeconomics (e.g., Austria). It will be very interesting to reassess matters once the Comparative Manifestos Project has coded party manifestos for elections held at the end of the 1990s and in the first half of the 2000s. Nevertheless, the clear message conveyed by political parties in their manifestos is that they see political conflict as primarily being about socioeconomics: about how services should be provided—by the public or the

[18]Note that modifications to the country–time invariant set of coding category–cleavage associations are not made for the countries of Denmark, Finland, Iceland, and Sweden. This is illustrated by their absence from Table 4.3. For these countries, the salience plotted is calculated using either the country–time invariant approach or the country–time variant approach that does not include modifications, depending on one's perspective.

[19]The pattern of particized cultural–ethnic conflict in Belgium is surprising at first glance: why such an extreme peak in the 1970s? A little investigation into Belgian history reveals the sensibility of the pattern, which is a testament to the power of political institutions. Language laws passed in the 1960s, such as establishing a linguistic frontier in 1962 and a compromise regulating language use in education in 1963, failed to head off the deeply rooted cultural–linguistic conflict. In the 1970s, a fundamental restructuring of Belgium's political institutions was undertaken to address the problem. In 1970, constitutional revisions established three 'Communities' enjoying cultural autonomy (French-speaking, Dutch-speaking, and German-speaking), which were self-regulating in the fields of culture and education, as well as three regions with limited economic decision-making powers (Brussels, Wallonia, and Flanders). Further reforms such as the creation of cultural and regional councils and the devolution of additional powers to the councils occurred in 1973 and 1977. In 1980 and 1988, regional governments were created and substantial powers transfered from the federal to the regional levels. Finally, in 1993, reforms were completed by the full-fledged federalization of Belgium: directly-elected regional governments and the federalization of the national legislature. Hence, the old 'Belgian problem', intractable for so long, came to a boiling point in the 1970s and was headed off by political institutional reform, i.e. decentralization followed ultimately by federalization. For Belgian history, see Witte, Craeybeckx and Meynen (2000); for persuasive new arguments and case study evidence that federalism aids in accommodating territorial cleavages, see Amoretti and Bermeo (2004), especially the chapter by Hooghe on Belgium in the same volume.

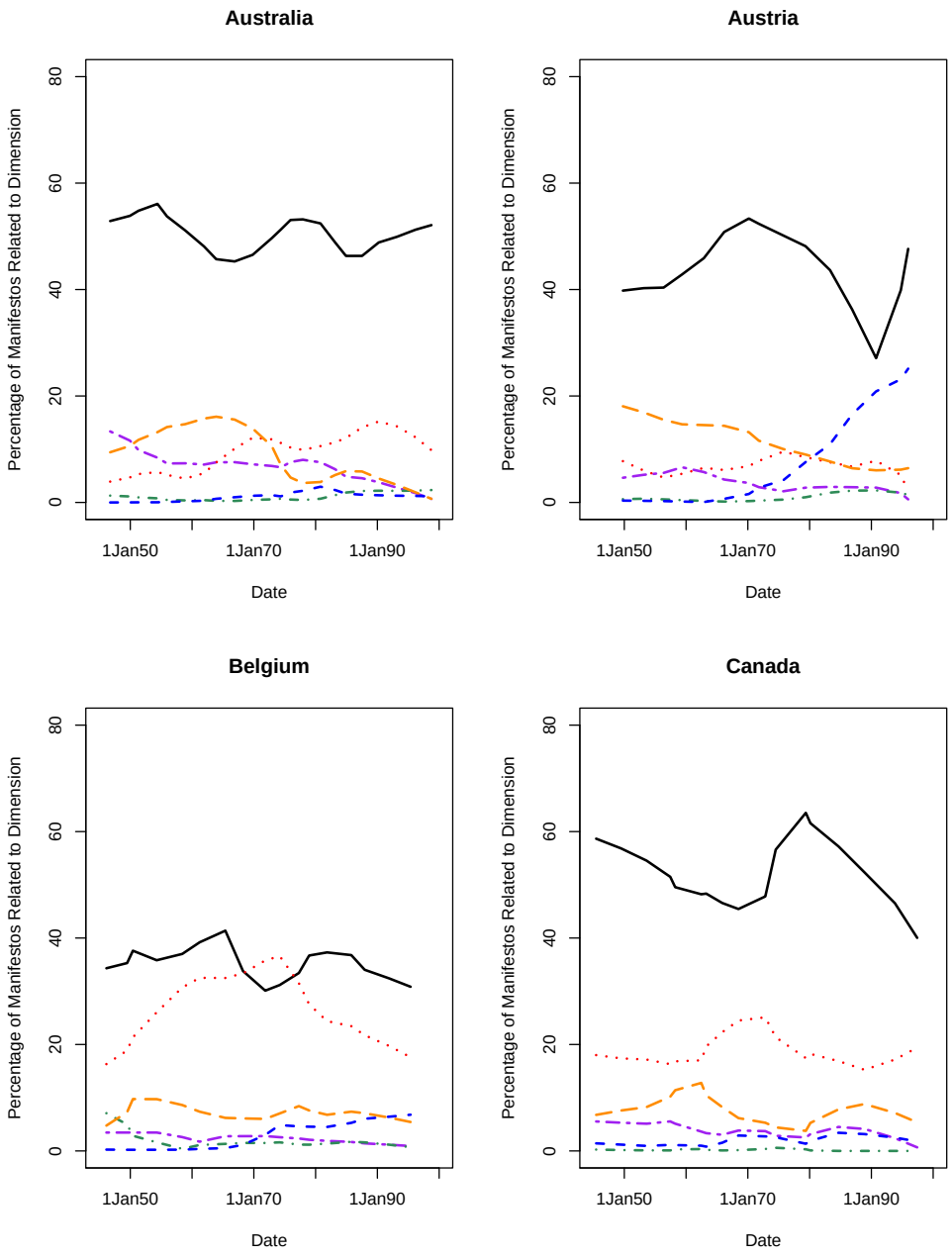

Figure 4.2: The salience of the particized ideological cleavages in Australia, Austria, Belgium, and Canada. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3. Legend is the same as that used in Figure 4.1.

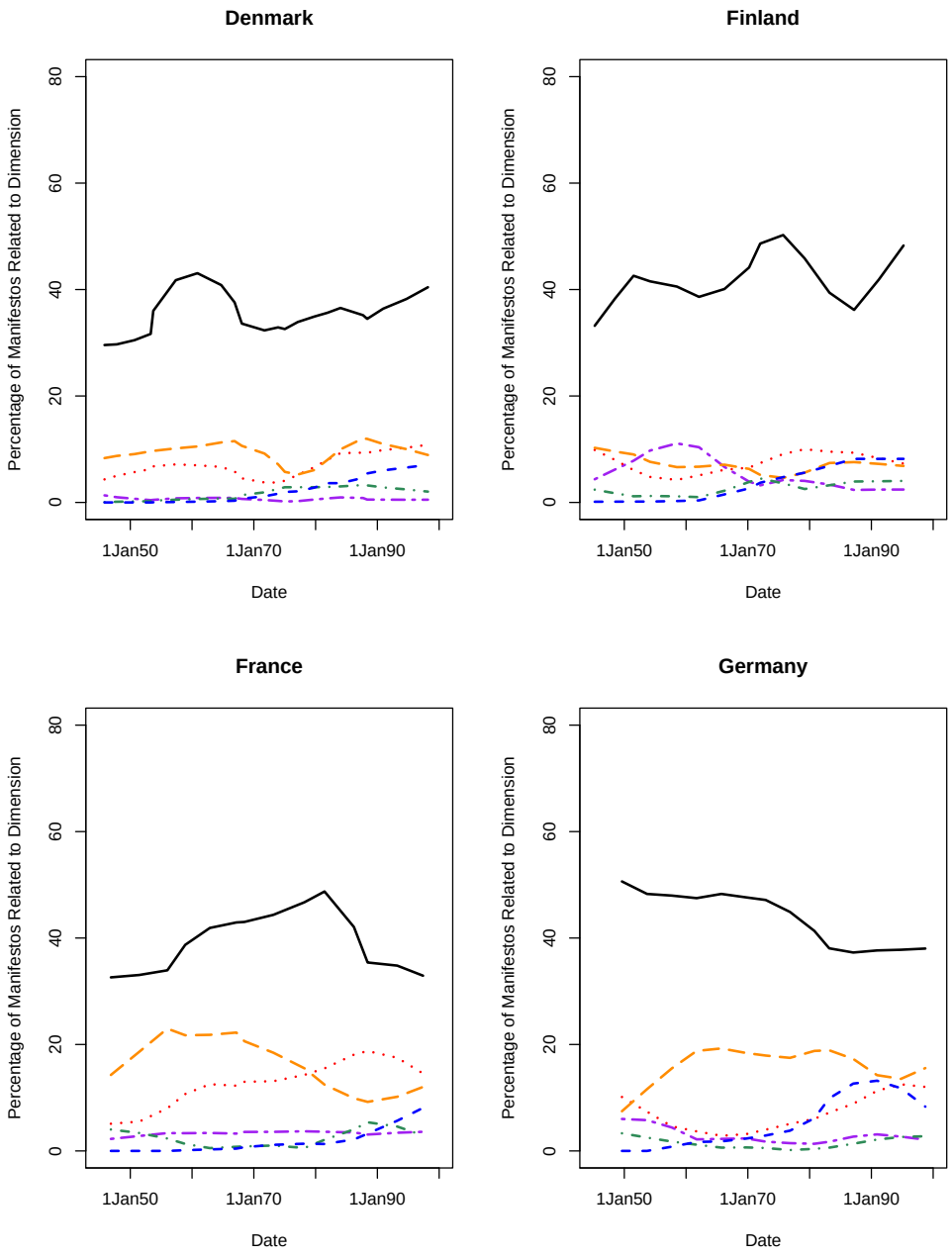

Figure 4.3: The salience of the particized ideological cleavages in Denmark, Finland, France, and Germany. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3. Legend is the same as that used in Figure 4.1.

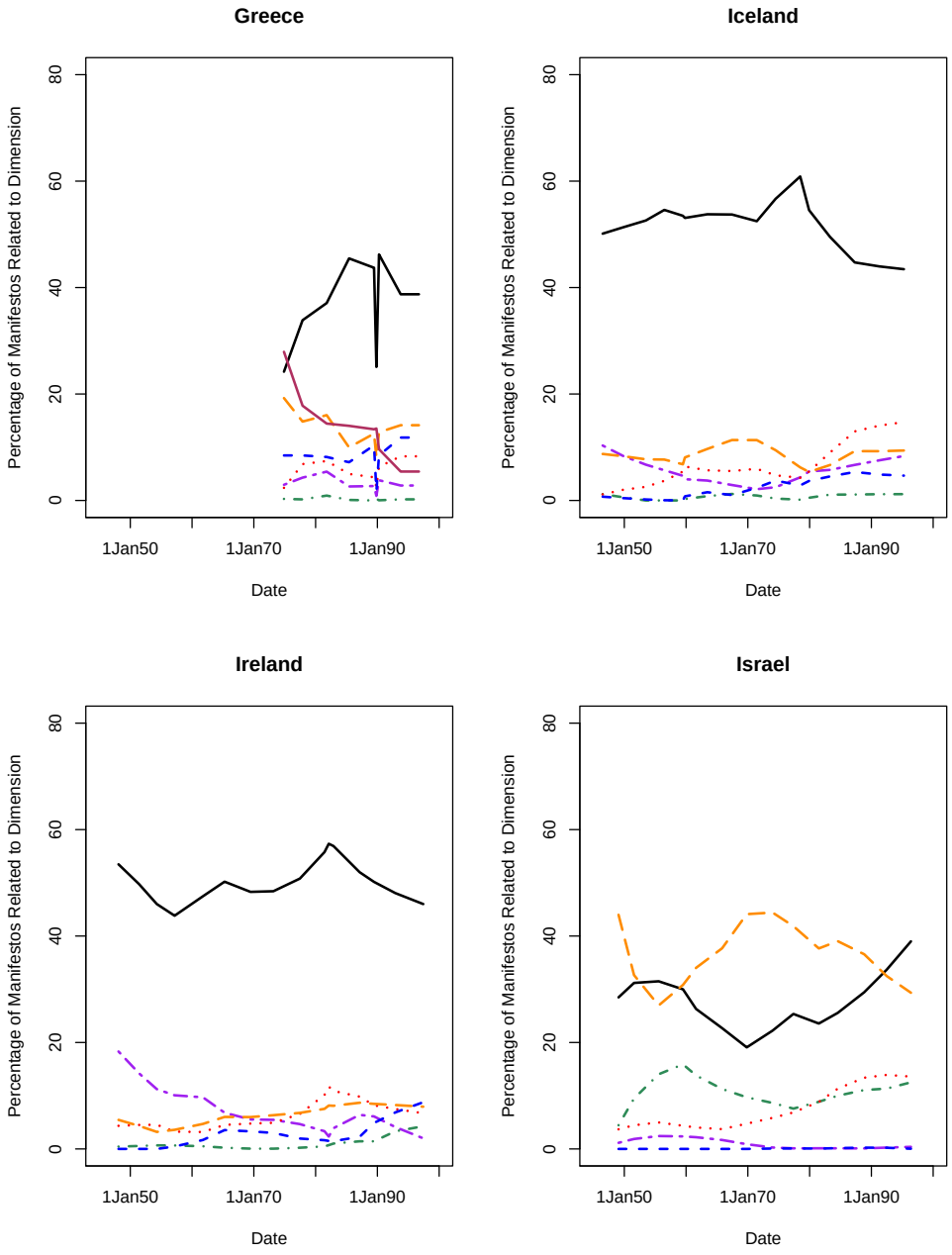

Figure 4.4: The salience of the particized ideological cleavages in Greece, Iceland, Ireland, and Israel. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3. Legend is the same as that used in Figure 4.1.

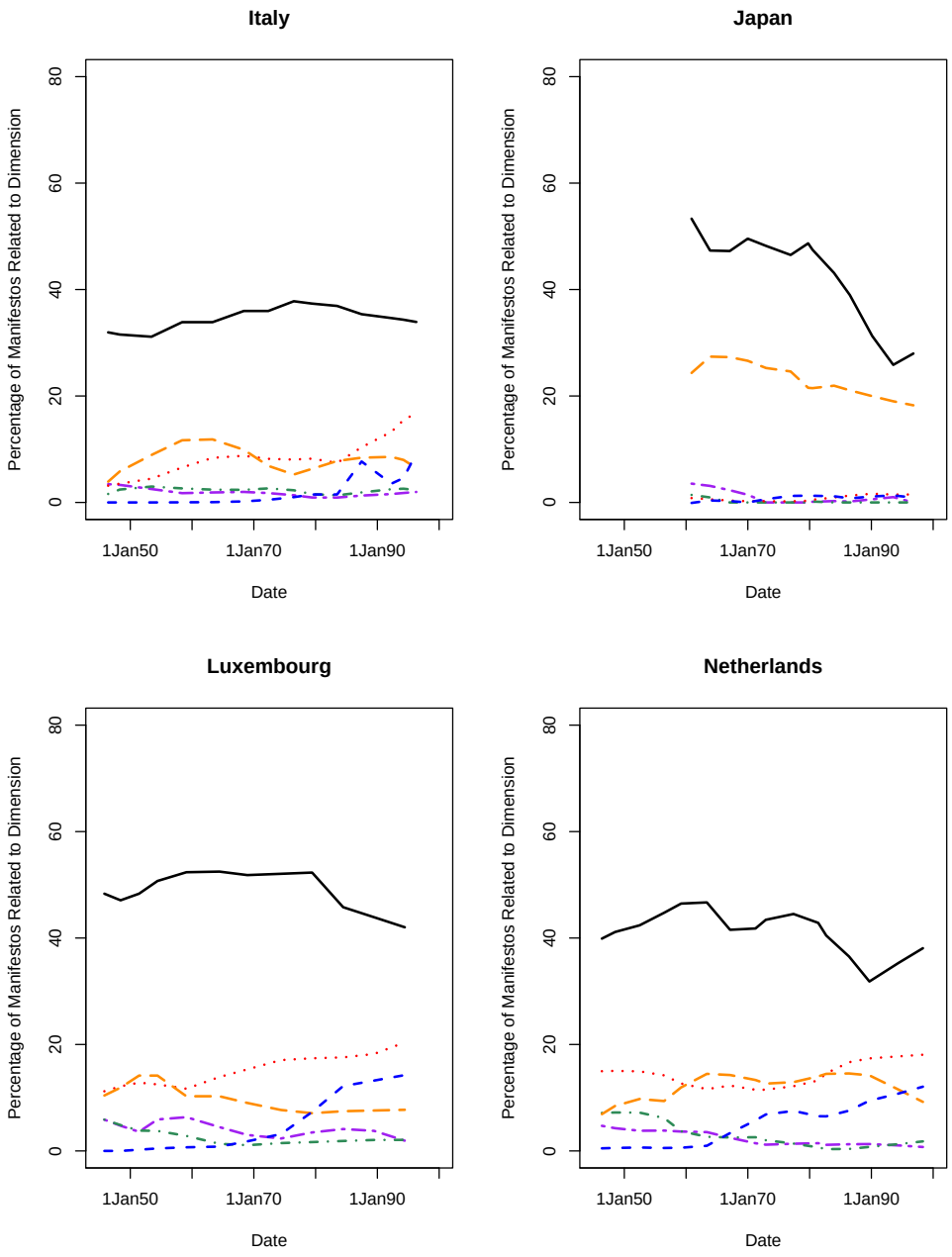

Figure 4.5: The salience of the particized ideological cleavages in Italy, Japan, Luxembourg, and Netherlands. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3. Legend is the same as that used in Figure 4.1.

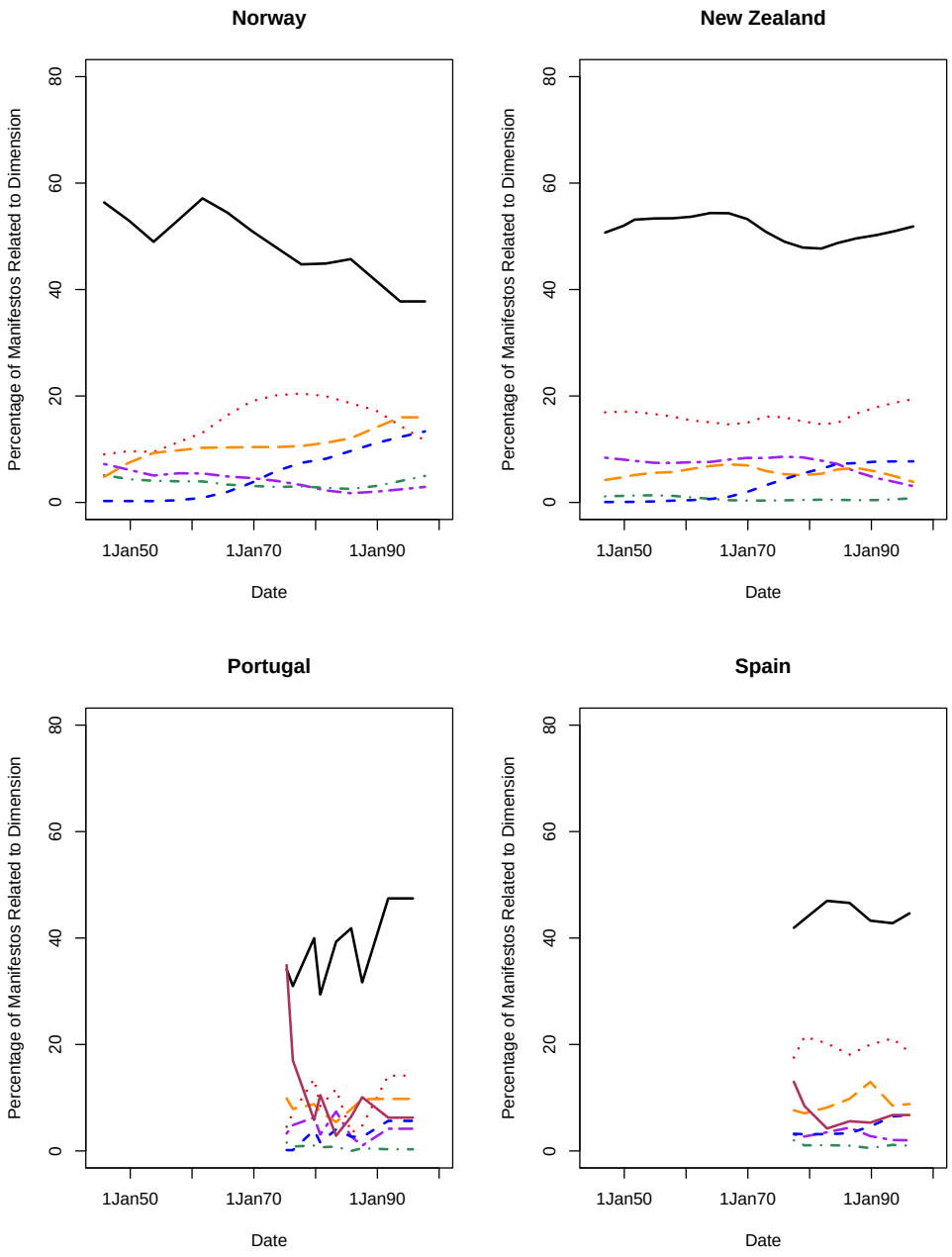

Figure 4.6: The salience of the particized ideological cleavages in Norway, New Zealand, Portugal, and Spain. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3. Legend is the same as that used in Figure 4.1.

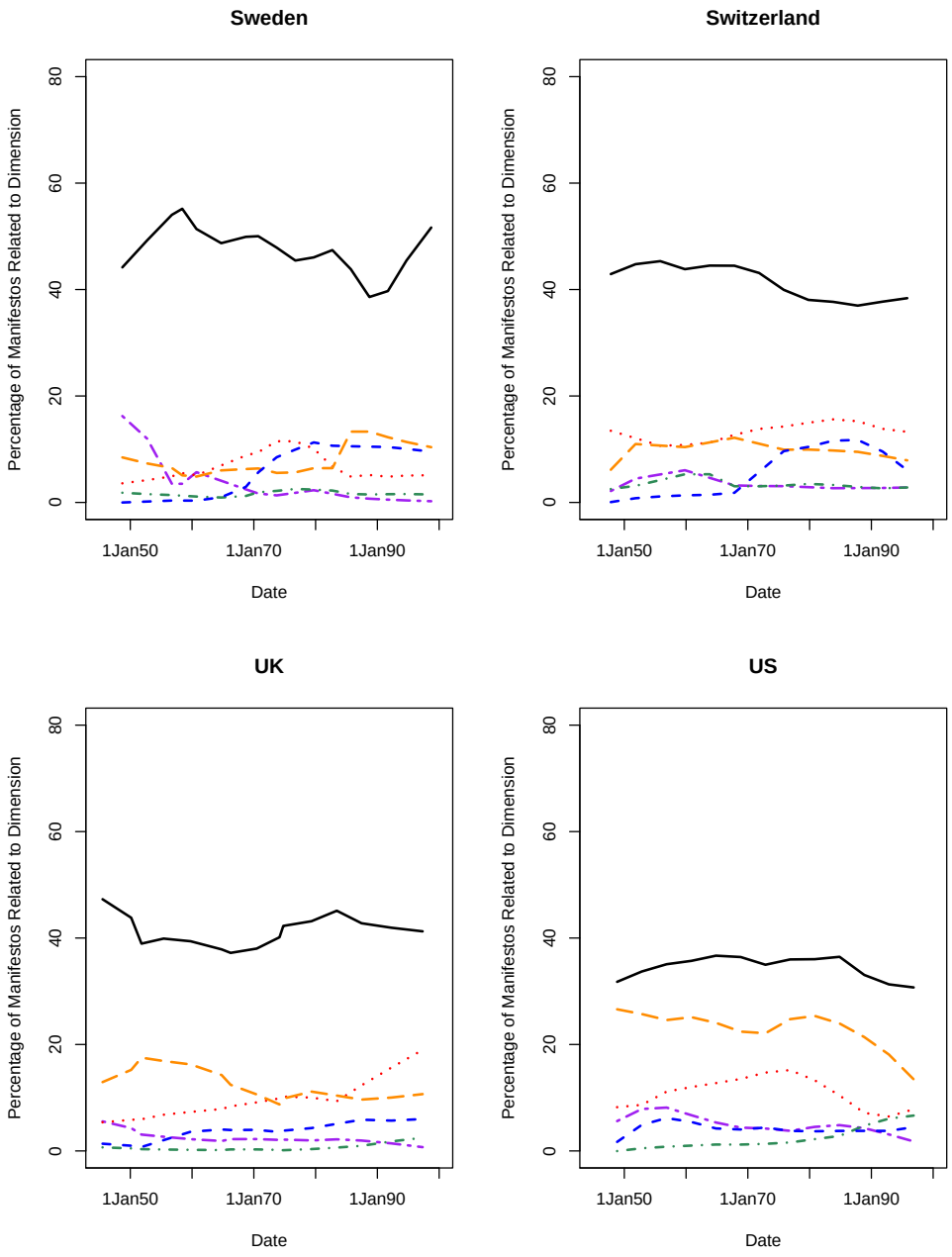

Figure 4.7: The salience of the particized ideological cleavages in Sweden, Switzerland, United Kingdom, and United States. Salience calculated using the polity–time specific method detailed in Tables 4.2 and 4.3. Legend is the same as that used in Figure 4.1.

private sector— and what the extent of redistribution to equalize opportunities should be. It should be emphasized that this is the nature of the particized ideological space *as defined by political parties* and particularly by their elites (leaders). The rank-and-file party membership and the populace at large may have very different ideas about the nature of the important political conflicts in their society. From the perspective of those who control the machinery of government, though, the preeminence of socioeconomic conflict across time and space is a striking cross-national similarity.

However, it is with the predominance of the socioeconomic cleavage that the similarity ends. Some countries have other less but still relevant cleavages at some points in time; some countries do not. Take, for example, Finland. Over time, the salience of its socioeconomic cleavage ranges from 32% to 53% with a mean of 42%; the highest salience attained by another cleavage is 15% in the 1991 election, which, it should be noted, is unusually high for Finland. There is not really a relevant second cleavage in Finland over most of the post-war period. Contrast this with any number of countries such as Israel, Austria, France, or Japan, where other cleavages do attain respectable levels of salience at various points in time. In Austria, for example, post-materialism is the subject of 23% of the parties' combined manifesto in the 1994 election, whereas only 29% of the combined manifesto is devoted to socioeconomics in that same election. For countries such as these, socioeconomic conflict is not the only game in town. Further, the natures of the second, third, and fourth, etc., salient cleavages vary both across time and space. Until the 1980s, the second most salient cleavage in Austria, France, and Japan was foreign policy. However, from the 1980s onwards, it has been post-materialism in Austria; culture–ethnicity in France; and still foreign policy in Japan. An interesting feature of the cross-time variation that can be observed in the plots is that in many countries, the dominance of socioeconomics was less challenged in the immediate post-war period than it is today, e.g. in Denmark, Germany, and Norway. Cultural–ethnic and post-materialist conflicts, in particular, are increasingly on the rise.

Finally, it seems appropriate to close this discussion of the nature of the particized issue space with what generalities can be drawn about other cleavages. First, the urban–rural cleavage declines in all countries except Iceland over the post-war period, in line with scholars' expectations.[20] Second, in most countries, religion is not a salient conflict, which confirms accounts such as those in Kalyvas (1994) that paint the bulk of modern church–state conflict in advanced industrial democracies as occurring in the late 19^{th} and early 20^{th} centuries. In some countries such as the Netherlands where religious conflict lingered into the post-war period, analysis of party manifestos reveals its decline from the late 1950s through the 1970s.[21] Some countries have experienced an upswing in the salience of religious issues in the 1980s and 1990s, however, such as the United States, France, and Germany.[22]

[20]In Iceland, oddly enough, the urban–rural cleavage declines until the 1970s and then begins a gradual increase that has almost (at the end of the 1990s) returned it to its immediate post-war level of salience. Lacking enough detailed knowledge of Icelandic politics, it is not possible to offer any hypotheses that account for this empirical finding.

[21]In the Netherlands, the institution of *verzuiling* or pillarization, at least in part the post-war manifestation of religious conflict in the Netherlands, has been well-documented in political science, (e.g., Lijphart 1977). The observed decline of the salience of religious issues in the Netherlands initially somewhat precedes and then overlaps with (particularly in the 1970s) the final breakdown in *verzuiling*.

[22]In the United States, an increased devotion of party manifestos to religious issues coincides with the rise of the Christian Right. In France, it is associated with the renewed debate over the accommodation

Third, post-materialism appears on the political scene in the 1970s or 1980s in most polities, as expected. Exceptions here include Israel and Japan, where post-materialism has no relevance for all intents and purposes, and to a lesser extent Australia and Canada, where it has very little. Some sharp drops in the salience of post-materialist issues towards the end of the 1990s (i.e., in the last elections included in the Project) in countries where the relevance of the cleavage has been otherwise steadily trending upwards are of note. Austria is a good example of this phenomenon. Either this is a mere election- or elections-specific fluctuation or it may portend the beginning of the end of post-materialism. Here, too, an additional ten years of manifestos data may shed light on the matter. Finally, some interesting trends in the salience of the foreign policy cleavage are present in the graphs. This cleavage was either fairly relevant in the 1950s–1970s in many countries (e.g., Austria) or countries experienced a spike in its salience around the 1960s (e.g., Canada). Either way, there is a striking correspondence between the relevance of foreign policy issues to political parties and the height of the Cold War. From roughly 1970 to 1989, when the Cold War began to thaw and finally drew to a close, foreign policy declined in importance, either absolutely or relative to other cleavages. This trend is particularly noticeable in 'front-line' states, either those bordering Eastern Europe (e.g., Italy, Austria, and Germany) or those with otherwise significant military stakes in the conflict (e.g., the United States, France, and the United Kingdom). Recently, some Western European countries have experienced an increase in foreign policy salience that undoubtedly relates to the expansion of the European Union, such as Norway and Sweden. In these countries, issues such as membership for countries like Norway and further integration (such as the current debate over a constitution for the Union) for countries like Sweden are increasingly important politically.

We can now turn to the dimensionality of the particized ideological space. Given the estimates of particized ideological cleavage salience just presented and the three summary measures that quantify dimensionality proposed in the prior section, what are the number of dimensions of the particized ideological space in the twenty-four countries? To illustrate the information about dimensionality that can be obtained from the data on cleavage salience, Figure 4.8 plots six estimates of dimensionality for Israel in keeping with the original example that opened the section. The LOWESS smoother is applied to bring out trends over time. Two sets of estimates are produced from each of the three measures N, NP, and NL discussed earlier. One set is calculated using salience from the country–time invariant approach and the other using salience from the country–time specific approach. The former versions of the estimates are henceforth identified using the subscript i for invariant (e.g., N_i) and the latter by the subscript v for variant (e.g., N_v).

From this figure, Israel's ideological space appears between two- and three-dimensional over the post-war period save for a roughly ten year interval from the mid-1960s to the mid-1970s when dimensionality is reduced below two. Further, its dimensionality at a given point in time varies with the measure used by at most 2.3 and at minimum 1.1 dimensions. As mentioned earlier in the section, salience calculated using the country–time invariant approach serves as an initial sensitivity check on salience calculated using the alternative, country–time specific approach. The choice of Israel is particularly illustrative in this respect as it is the polity where dimensionality is least robust to the method of calculating salience. The reason is that the difference in salience of foreign policy and

of religious—particularly Muslim—minorities in public life, which often occurs in the context of a broader debate about immigration.

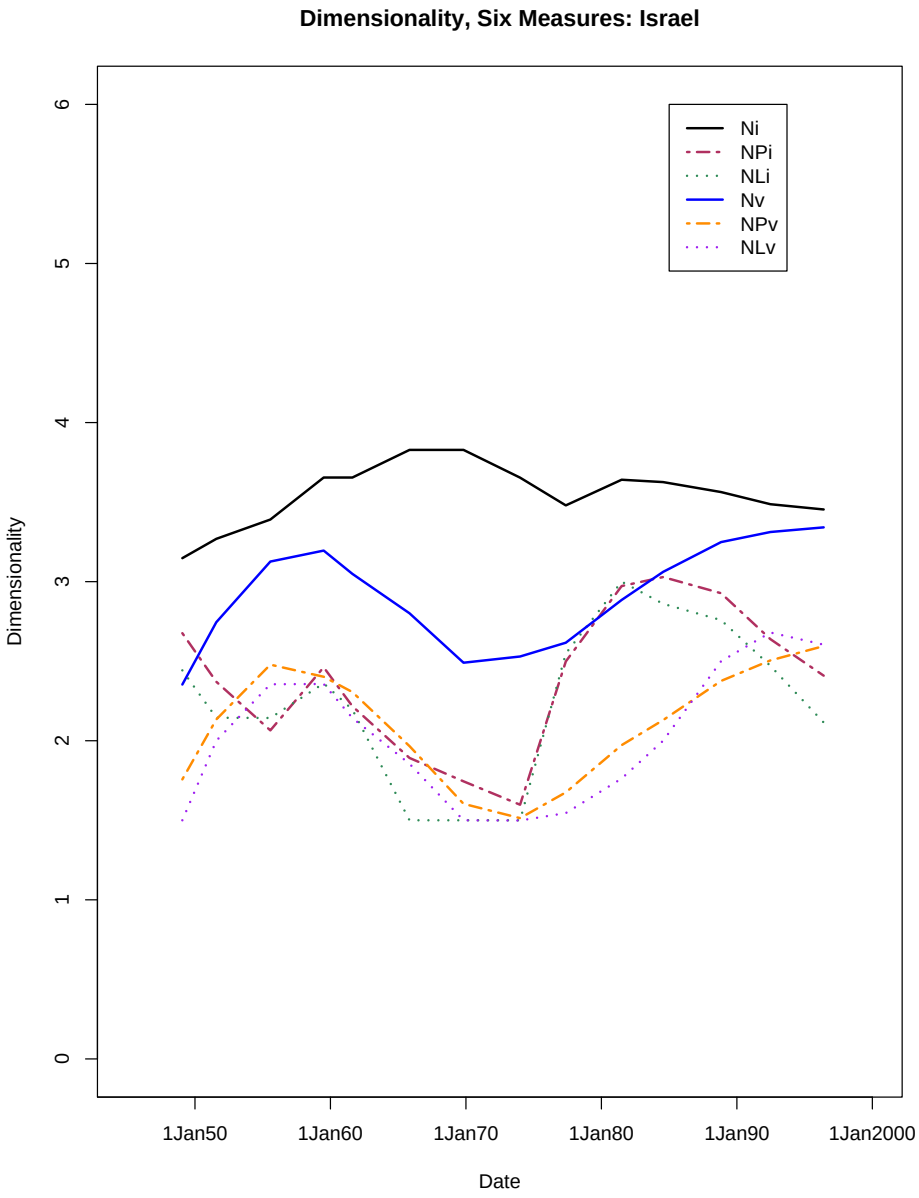

Figure 4.8: Six estimates of the dimensionality of the particized ideological space in Israel from 1945–98. Each of three summary measures—N, the effective number; NP, Molinar's modified N; and NL, the Lijphart-inspired method—appears twice, applied to cleavage salience calculated using both country–time variant (denoted by subscript v) and country-time invariant methods (denoted by subscript i) detailed in Tables 4.2 and 4.3.

socioeconomics is much greater using the country–time specific than the invariant approach for roughly a twenty year interval beginning in 1970. During this period, there appears to be one very dominant cleavage using the country–time variant method, while the two cleavages appear of more equal salience using the country–time invariant approach. Accordingly, the summary measures record a smaller dimensionality using the former than the latter estimates of salience during this period. It should nevertheless be clear from Figure 4.8 that the pair of estimates derived from each summary measure (e.g., N_i and N_v) track each other closely outside of this problematic period. Even within the period, their trends are similar and the estimates themselves are not terribly divergent. Additionally, the effective number measure N yields a dimensionality that is almost always greater than the other two measures, usually significantly so. This is due to the fact that N over-counts the cleavage with the highest salience, as discussed earlier and originally pointed out by Molinar (1991). Finally, it should be apparent from the figure that the Lijphart-equivalent and Molinar's modification of N measures generally yield similar results.

To put the Israeli example in perspective, Figures 4.9–4.14 plot up to six estimates of dimensionality for each of the twenty-four countries studied. The proviso "up to" is necessary because the two methods of calculating salience yield the same estimates of cleavage salience for Denmark, Finland, Iceland, and Sweden. Accordingly, for these four countries, there is only one set of dimensionality estimates per summary measure. Note that the line types and colors in the plots correspond to the same measures as in Figure 4.8. Note as well that the LOWESS smoother is again applied to the data prior to plotting in order to bring out trends over time.

What methodological and substantive conclusions can we draw from Figures 4.9–4.14? Substantively, dimensionality ranges from between one and four over the post-war period in the twenty-four countries. This accords with expectations derived from the spatial theory literature: by their very nature, ideological spaces should not contain many dimensions. It also accords with our common sense notions about political conflict around the globe. For example, many scholars have deemed socioeconomics the preeminent conflict in modern societies, which should be—and is—reflected in the ideological space being close to one-dimensional in most polities over a substantial proportion of the post-war period. However, dimensionality does vary from country to country. For example, while dimensionality ranges from approximately 2 to 4 at a given time in the United States, depending on the measure used, it ranges from approximately 1 to 3 in Sweden. Further, dimensionality varies over time. Many countries have experienced an increase in the size of their particized ideological space over the post-war period, particularly from the 1980s onward.

On the methodological front, the similarity of the Lijphart equivalent and Molinar's modified N measures should be apparent. So, too, should the similarity of dimensionality calculated using a summary measure applied to country–time invariant estimates of salience and dimensionality calculated using the same summary measure applied to country–time specific salience estimates. That is, with the partial exception of Israel, each summary measure yields similar results when applied to the different estimates of cleavage salience. This finding should increase our confidence in using the theoretically-preferred country–time variant estimates of salience as inputs into a summary measure to produce estimates of dimensionality. While we need to check the sensitivity of the dimensionality estimates to other changes in the set of coding category–cleavage associations before we can be truly confident that they are robust to reasonable variations in the method of calculating salience,

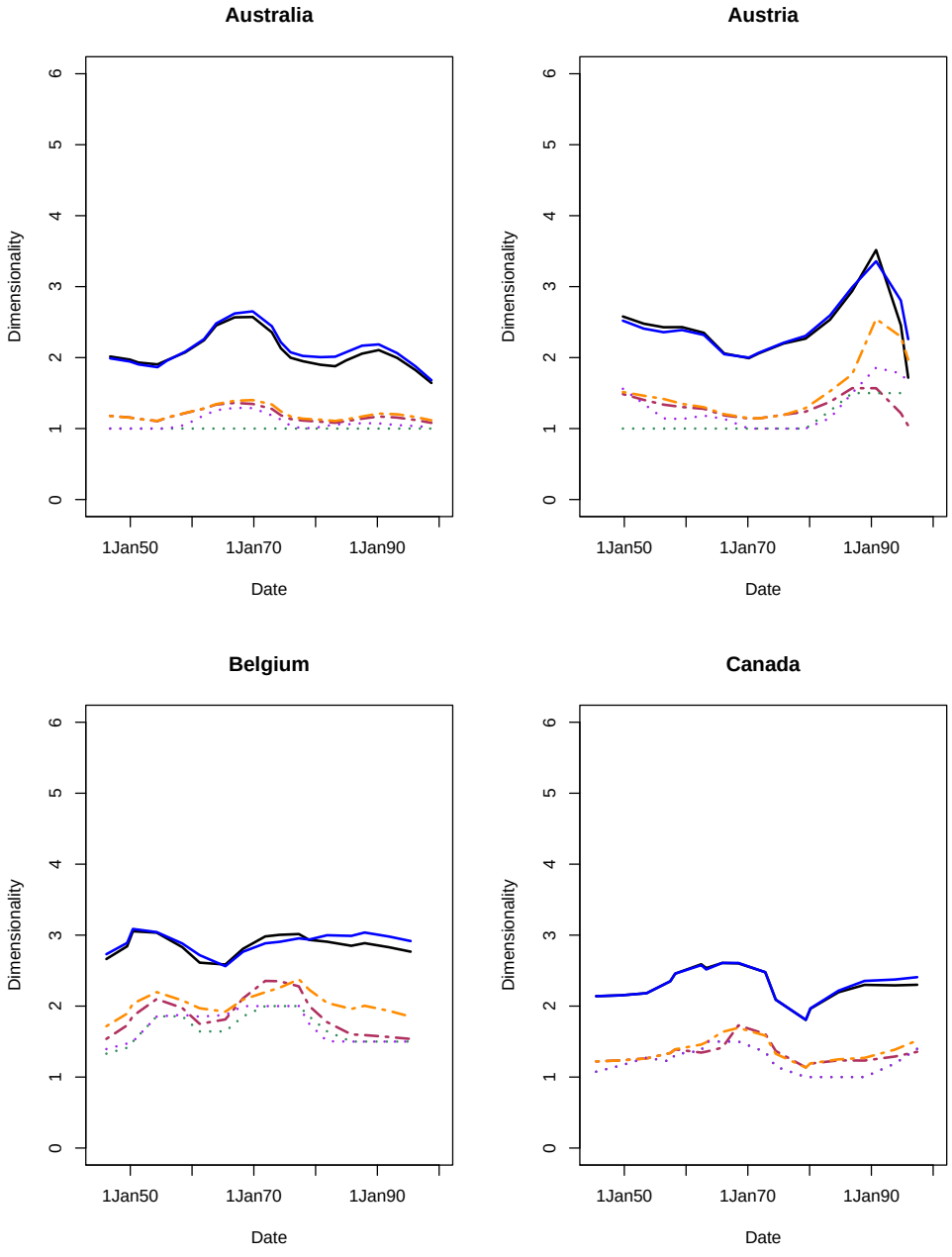

Figure 4.9: Six estimates of the dimensionality of the particized ideological space in Australia, Austria, Belgium, and Canada. Otherwise as in Figure 4.8.

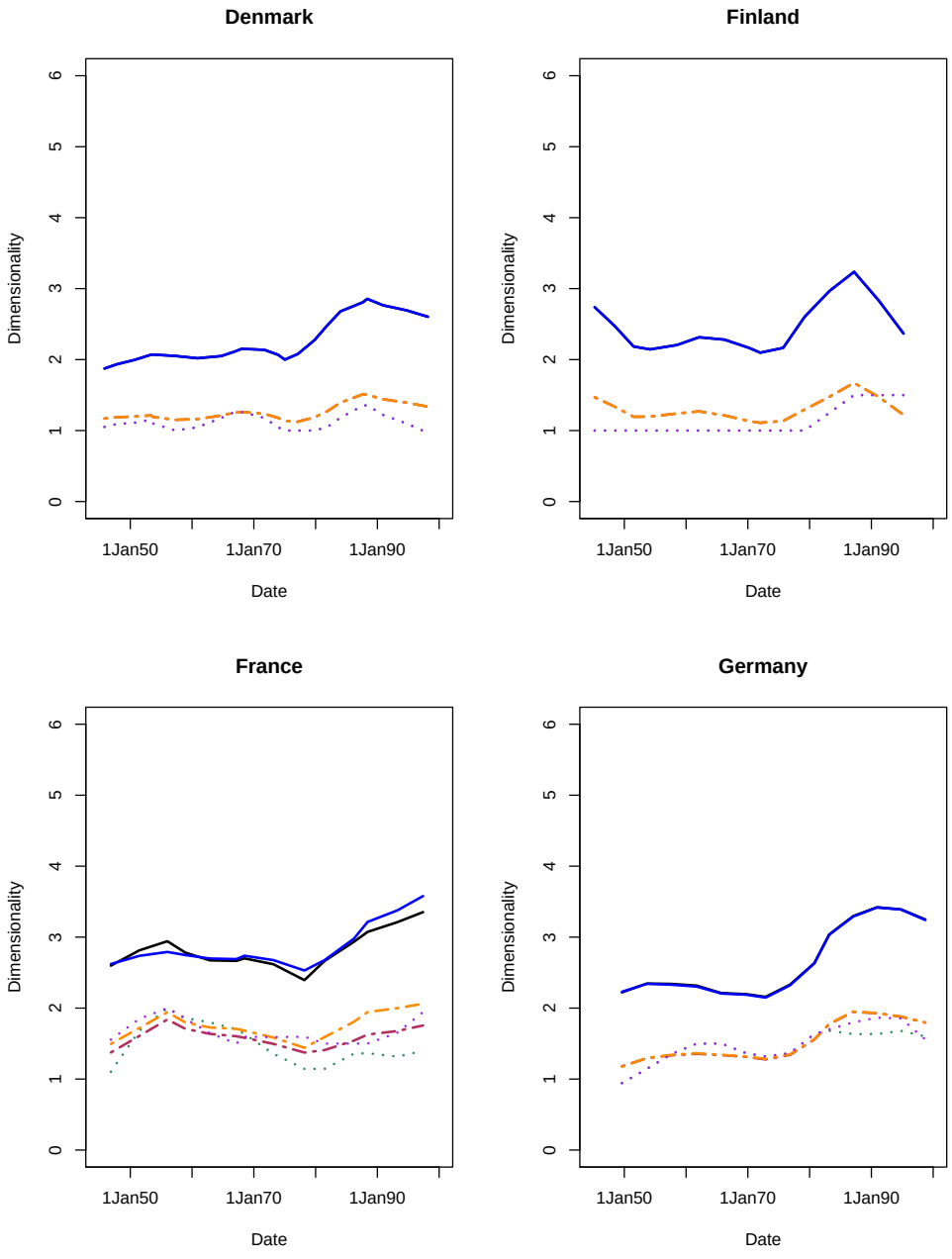

Figure 4.10: Six estimates of the dimensionality of the particized ideological space in Denmark, Finland, France, and Germany. Otherwise as in Figure 4.8.

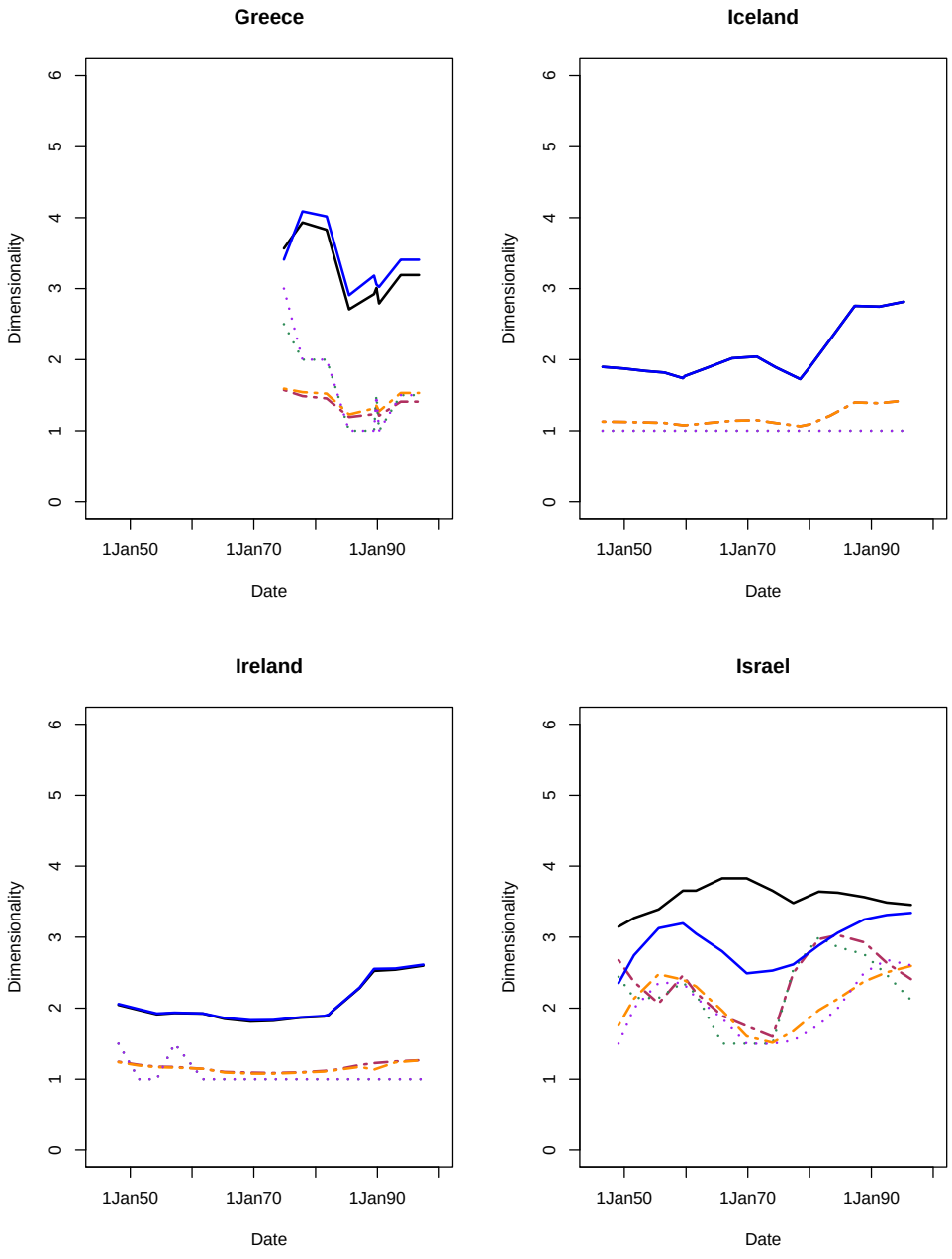

Figure 4.11: Six estimates of the dimensionality of the particized ideological space in Greece, Iceland, Ireland, and Israel. Otherwise as in Figure 4.8.

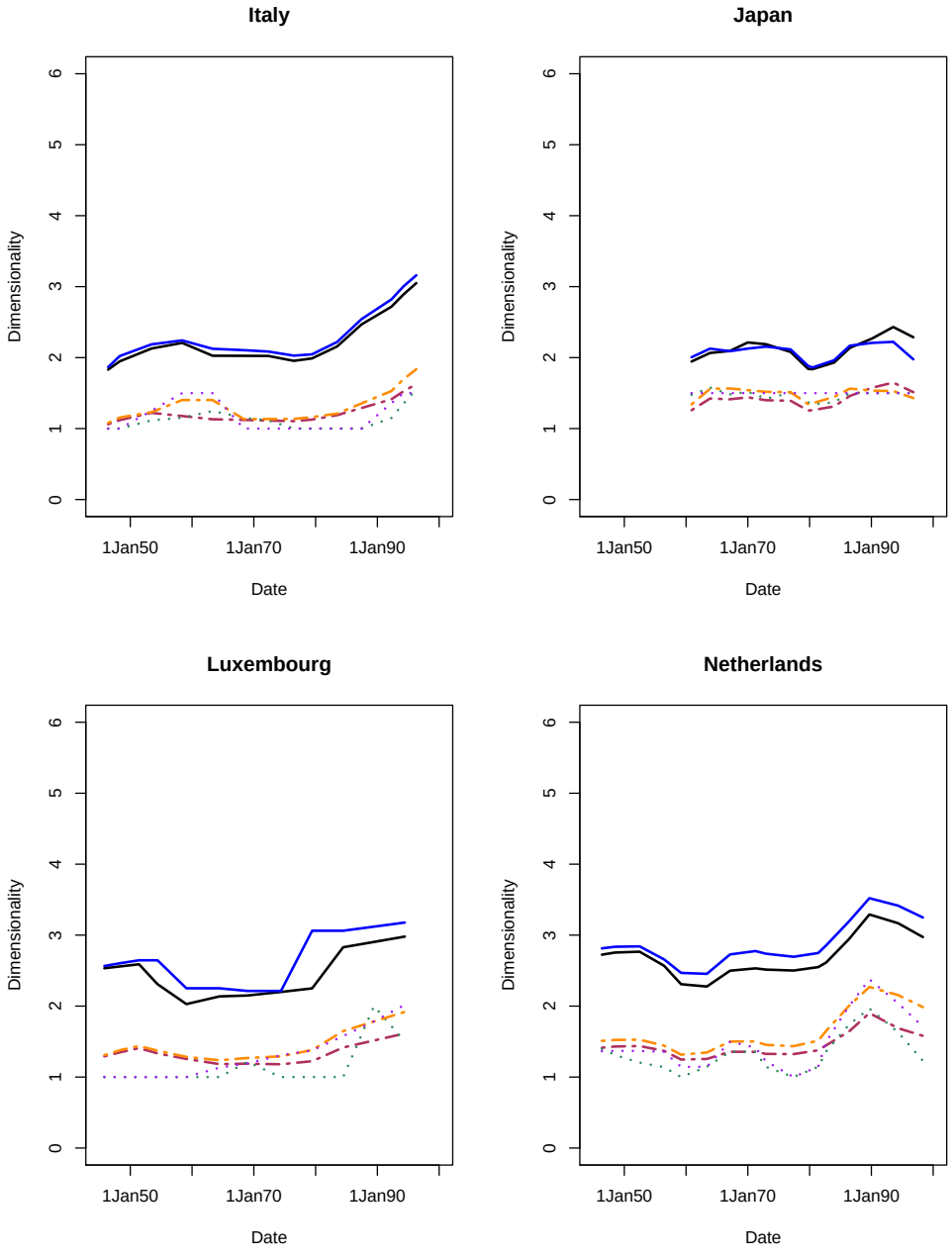

Figure 4.12: Six estimates of the dimensionality of the particized ideological space in Italy, Japan, Luxembourg, and Netherlands. Otherwise as in Figure 4.8.

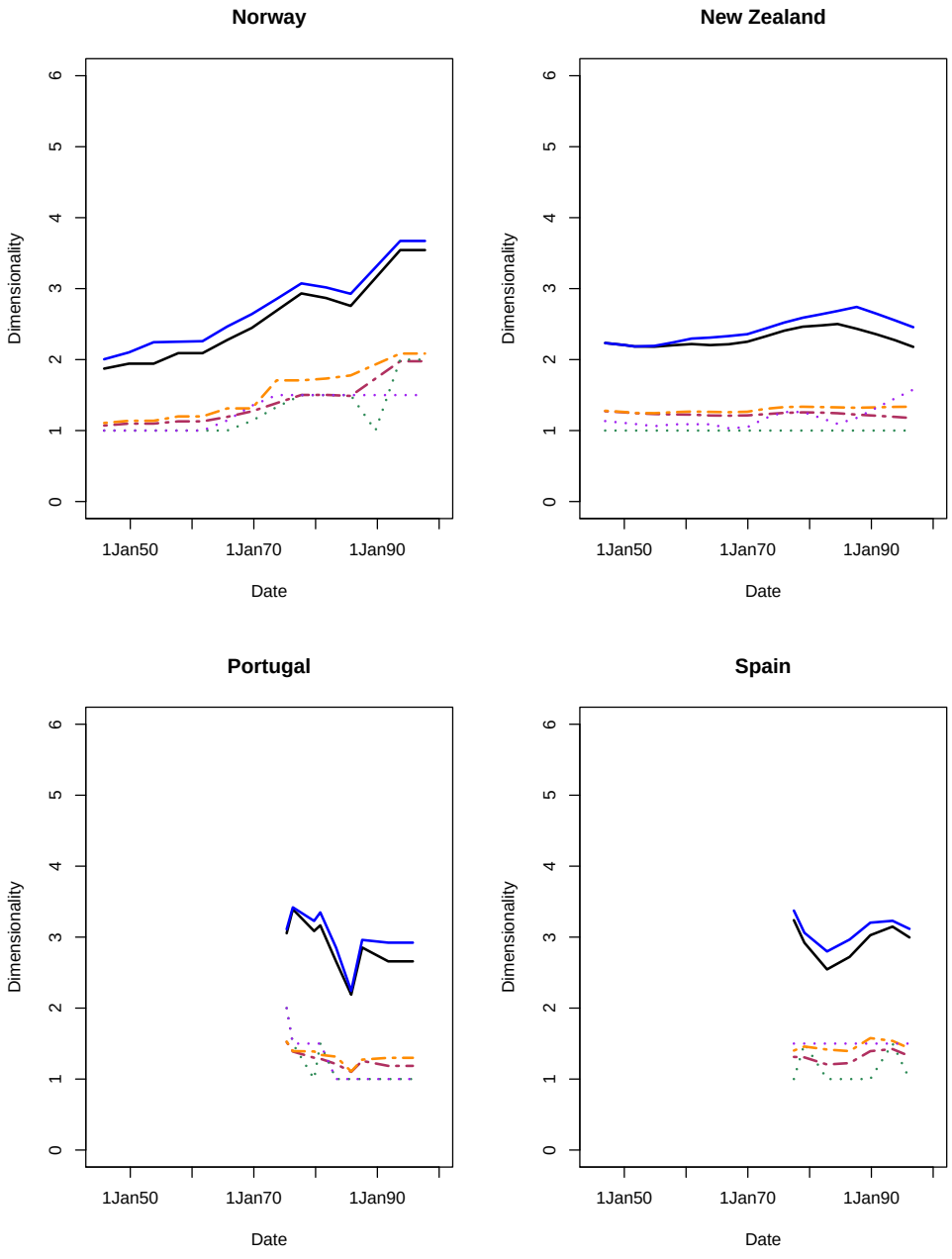

Figure 4.13: Six estimates of the dimensionality of the particized ideological space in Norway, New Zealand, Portugal, and Spain. Otherwise as in Figure 4.8.

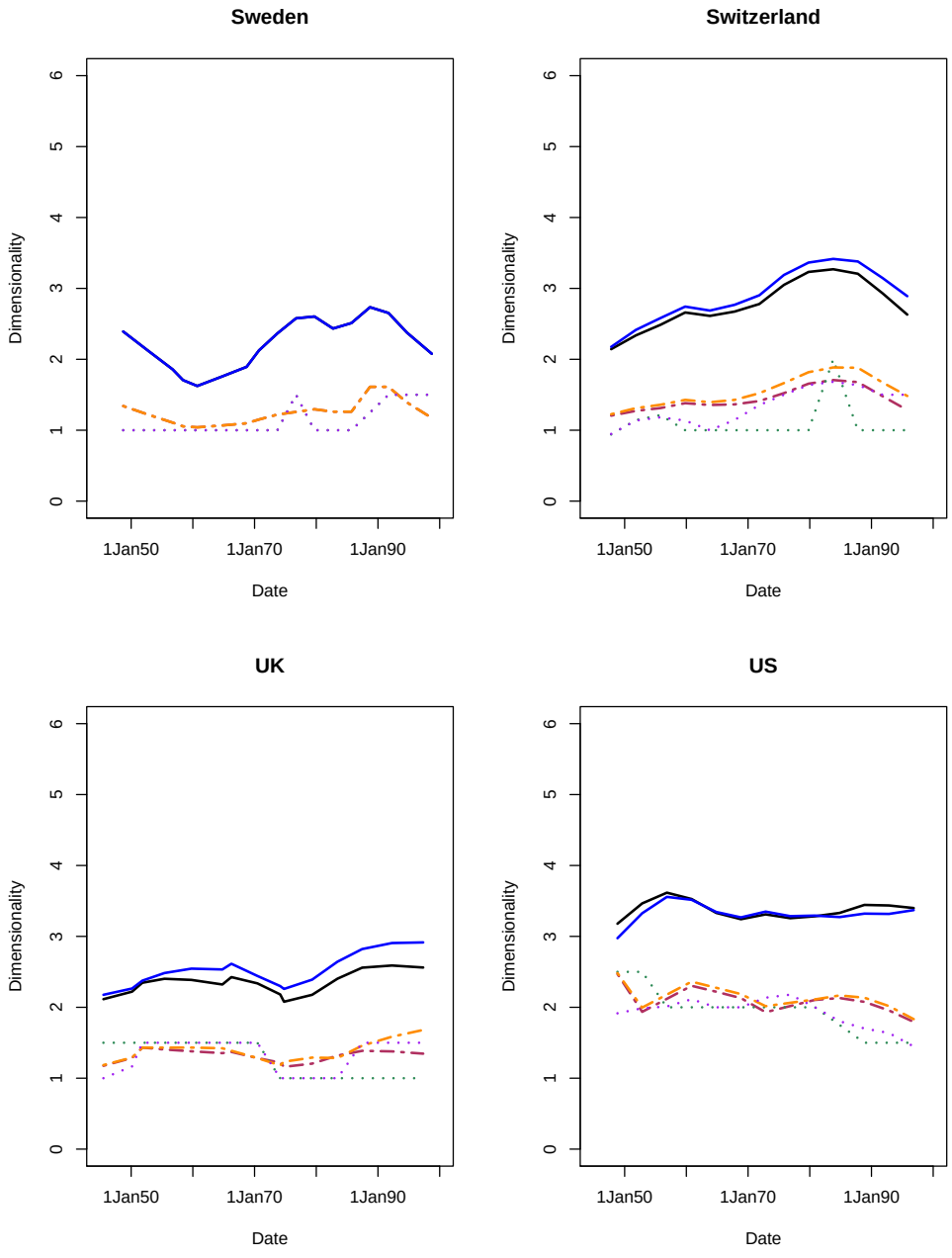

Figure 4.14: Six estimates of the dimensionality of the particized ideological space in Sweden, Switzerland, United Kingdom, and United States. Otherwise as in Figure 4.8.

Polity	Mean NP_v
Australia	1.31
Belgium	2.00
France	1.77
Ireland	1.15
United Kingdom	1.47
United States	2.27

Table 4.4: Mean dimensionality of the particized ideological space in six polities. Dimensionality estimated using the measure NP_v, Molinar's modification of N applied to salience calculated using the country–time specific method, and average taken over time.

this is a good first step. Further, the measure N consistently over-estimates dimensionality relative to the other two measures, regardless of the method of calculating salience used. This fact combined with the fact that N rarely estimates dimensionality to be less than 2 reduces its desirability as a summary measure. Finally, while both Molinar's NP and the Lijphart equivalent NL yield similar results, the former seems preferable due to its less arbitrary nature.

Finally, to close the discussion of variance in the particized ideological space, Figure 4.15 plots dimensionality over time for six countries: Australia, Belgium, France, Ireland, the United Kingdom, and the United States. As before, the LOWESS smoother is applied to the data prior to plotting. What should be apparent from this figure is the cross-national variance alluded to earlier. While rankings of the dimensionality of the six countries are not identical at every time period, some conclusions about their relative dimensionality can be drawn. Ireland and Australia have particized ideological spaces that are close to one-dimensional and always have fewer cleavages than the other four countries. The United Kingdom has a slightly more than one-dimensional particized ideological space (roughly 1.5 particized cleavages throughout the post-war period). It always has fewer cleavages than France, Belgium, and the United States and more cleavages than Ireland and Australia save for a short interval around 1970. France has between approximately 1.5 and 2 particized ideological cleavages, which is almost always less than the number of cleavages possessed by Belgium and the United States. The dimensionality of the latter two countries ranges from approximately 1.75 to 2.5. This cross-national variance can also be seen in Table 4.4, which displays the estimated mean dimensionality of the six countries. Both Figure 4.15 and Table 4.4 lead us to conclude that some countries such as the United States and Belgium are characterized by greater particized preference diversity than others such as Australia and Ireland. While the former two countries have been riven by multiple political conflicts at most points in time, the latter two have usually only experienced one. To summarize, then, this section has provided evidence to support the claim that there is important cross-national and -time variation in particized preferences, i.e. in the number and nature of particized cleavages. The types of issues on the political agenda are not the same every where and every when.

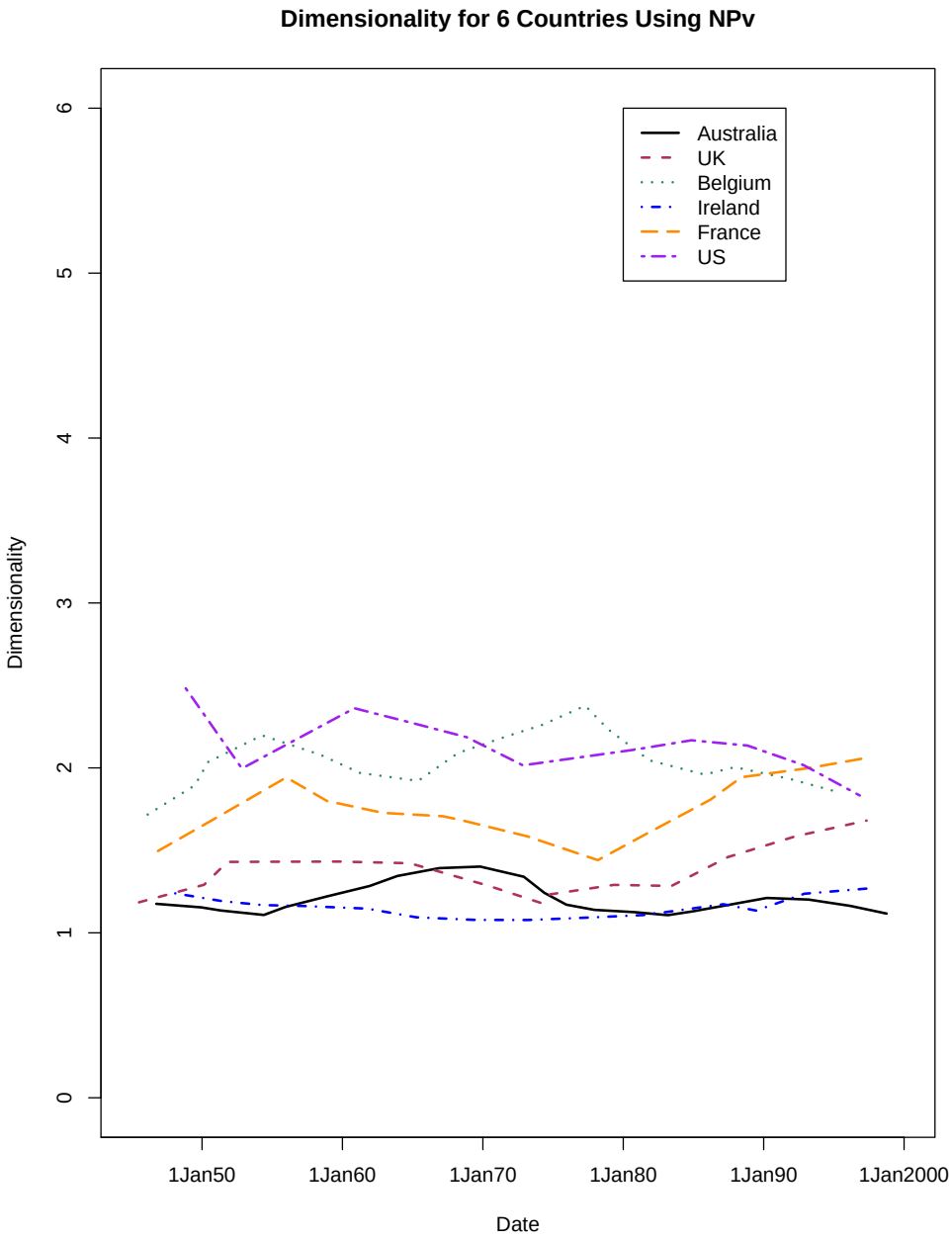

Figure 4.15: The dimensionality of the particized ideological space of Australia, Belgium, France, Ireland, the United Kingdom, and the United States using the measure NP_v, Molinar's modified N with salience calculated using the country–time specific method detailed in Tables 4.2 and 4.3.

4.1.3 Sensitivity Analysis and Comparison with Other Measures

Before closing, sensitivity issues need to be addressed in greater depth than they have been thus far. First, how sensitive is the qualitative analysis yielding the nature of the particized cleavages in each country to changes in the method of calculating salience? In addition to the two methods discussed at length in the text, the country–time invariant and variant, five alternative methods of calculating salience were also used to assess sensitivity. In no particular order, they are: associating 'Culture' and 'Law and Order' invariantly with the cultural–ethnic cleavage, invariantly with the post-materialist cleavage, and with no cleavage (i.e., ignoring them entirely); leaving out 'Political Authority' entirely; and eliminating all idiosyncratic country–time specific modifications (e.g., the association of the two 'Constitutionalism' coding categories with the cultural–ethnic cleavage in Canada).

Many of the conclusions drawn about the nature of the particized ideological space are not sensitive to the use of these alternative methods. Certainly, the overall dominance of the socio-economic cleavage is not altered, nor is the presence or absence of secondary cleavages that challenge its dominance in particular countries and elections. Most sensitive, not surprisingly, is the relative salience of the cultural–ethnic and post-materialist cleavages in some countries. For example, if both 'Law and Order' and 'Culture' are associated with the post-materialist cleavage instead of either being both associated with the cultural–ethnic cleavage or associated with cleavages as presented in Table 4.3, post-materialism comes close to rivaling culture–ethnicity in Belgium in the 1990s; out-rivals both culture–ethnicity and foreign policy in France in the 1990s; and dominates all other secondary cleavages in Luxembourg, Switzerland, the Netherlands, and the Scandinavian polities from the 1980s onward. To some degree, this reflects the fact that it is difficult to distinguish between these two cleavages, both theoretically and empirically. The latter is particularly true in light of the coding methodology of the Comparative Manifestos Group. However, while some qualifications regarding conclusions about the relative salience of the post-materialist and cultural–ethnic cleavages are in order, arguing for the unambiguous association of 'Law and Order' and 'Culture' with post-materialism seems a difficult—and ultimately dubious—task. The thesis is more confident in the nuanced associations reflected in Table 4.3, which yield the (albeit now slightly hedged) conclusions presented in the prior section that do not allow post-materialism such a prominent role.

As far as how sensitive conclusions are to the elimination of the arguably more controversial idiosyncratic country- and time-specific associations, the answer is not very. As was discussed in the prior section, associating the 'National Way of Life' categories with the cultural–ethnic instead of the foreign policy cleavage in Israel reduces the foreign policy cleavage to a close second to the socioeconomic over most of the post-war period. However, this association seems theoretically indefensible. Eliminating the association of the 'Democracy', 'Human Rights', and 'Political Authority' categories with foreign policy in Israel only slightly decreases its dominance. In other words, the dominance of foreign policy in Israel is not sensitive to all but the association of the 'National Way of Life' categories with the cultural–ethnic cleavage. Even in this case, foreign policy is still of roughly equal salience to socioeconomics. Eliminating the association of the 'Constitutionalism' categories with the cultural–ethnic cleavage in both Belgium and Canada does not alter the conclusions drawn: the empirical effect of these changes is barely noticeable. In Japan, failing to remove the association of 'Centralization' and 'Decentralization' with the cultural–ethnic

	N_i	NP_i	NL_i	N_v	NP_v	NL_v
N_i	1.00					
NP_i	0.81	1.00				
NL_i	0.69	0.89	1.00			
N_v	0.95	0.68	0.55	1.00		
NP_v	0.83	0.88	0.77	0.80	1.00	
NL_v	0.71	0.77	0.82	0.69	0.86	1.00

Table 4.5: The Pearson Correlation Coefficients between the Six Measure of Dimensionality of the Particized Ideological Space.

cleavage results in a very small but upward-trending cultural–ethnic cleavage from the 1980s onwards. The two polities least robust in certain respects are Austria and France. Eliminating the association of 'Political Authority' with the post-materialist cleavage in Austria leaves post-materialism peaking around 1990 and then trending downwards instead of on a steady upward trend poised to overtake socioeconomics. Similarly, eliminating the association of the 'National Way of Life' categories with the cultural–ethnic cleavage from the 1980s on in France (instead associating them with foreign policy) yields cultural–ethnic and foreign policy cleavages of roughly equal salience after 1980 instead of the former peaking relative to the latter around 1990.

Second, how sensitive are conclusions about dimensionality to reasonable variations in the coding category–cleavage associations that are used to calculate salience? An initial answer is provided by examining the correlation between the measures of dimensionality developed in the prior section. Table 4.5 presents the Pearson correlation coefficients for all pairwise combinations of these measures. The high correlation between the two variants of N and reasonably high correlations between the two variants of both NP and NL make precise what the earlier discussion hinted at: the greatest difference in estimates of dimensionality is obtained from using different summary measures, not from using different methods of calculating salience. Specifically, N—whether calculated using the salience produced by the country–time invariant or the country–time specific method—does not correlate remarkably well with the other two summary measures. With the lowest correlation coefficient equal to 0.55 (for the relationship between N_v and NL_i) and the second lowest to 0.68 (for the relationship between N_v and NP_i), though, it would be an overstatement to say that a linear association does not exist between N and the other measures. Conversely, NP and NL do correlate well: when salience is calculated using the country–time invariant method for both, their correlation coefficient is 0.86; when using the country–time specific method, it is 0.89.

This relatively informal analysis suggests that the estimates of dimensionality are not sensitive to different methods of calculating salience and less so but still not sensitive to different summary measures. The clear theoretical and empirical arguments against the use of N—over-counting of the most salient dimension(s)—suggests that we should only consider using one of the two remaining measures, NP or NL, and here the estimates are much less sensitive to our choice. Regardless, there is another tool we can use to assess the results obtained using the different summary measures and methods of calculating salience: a non-

parametric rank test for independence (Lehmann 1998, 297–303).[23] That is, for a sample of countries, we want to test whether or not two sets of estimates of mean dimensionality are related, such as the average of N_i and the average of NP_i. The null hypothesis is that they are not. The most general alternative hypothesis is two-sided: that they are related. A rank test of independence for each pair of mean estimates[24] reveals that the null hypothesis of no association is rejected at standard levels of significance ($p = 0.05$) for each.[25] In other words, countries are generally ranked quite similarly by the different measures. It seems as if the various measures of dimensionality developed here are all measuring the same underlying attribute of the particized ideological space.

Finally, what about the relationship of the measures of dimensionality developed here to others? As discussed in Chapter 2, the only other cross-national time-series measure is Nyblade's (2004). To the best of the thesis's knowledge, his estimates of dimensionality are not publicly available. However, he does publish mean estimates for the seventeen West European countries that he studies. Table 4.6 compares them to the mean estimates of dimensionality derived from the six measures developed in the prior section, N_i, NP_i, NL_i, N_v, NP_v, and NL_v, each averaged over time for each country. Lijphart's (1999) estimates of the number of issue dimensions in these seventeen countries are also included in the table.[26]

[23]Rank tests for independence or trends are useful when the "factors being studied are not treatments that the investigator can assign to his subjects but conditions or attributes which are inseparably attached to these subjects" (Lehmann 1998, 297). Here, the factors are two estimates of mean dimensionality and the subjects are countries. The set of N polities for which estimates are available are viewed as a sample from the larger population of democratic polities. The mean dimensionality of each polity is ranked (from lowest to highest) for each set of estimates and denoted (R_i, S_i) for the i^{th} polity. The test statistic for the null hypothesis of independence against the alternative hypothesis of a relationship (either positive or negative association) is

$$D = \sum_{i=1}^{N} (S_i - R_i)^2 \ ,$$

$i = 1, 2, \ldots, N$. Either small or large values of D provide evidence against the null hypothesis. Under the null hypothesis, the distribution of D is approximately normal for sufficiently large N. The normal approximation is used here as tables of the exact distribution only extend to $N = 11$. The expectation and variance required for the normal approximation are

$$E_{H_0}[D] = \frac{N^3 - N}{6}$$

and

$$Var_{H_0}[D] = \frac{N^2(N+1)^2(N-1)}{36} \ .$$

Note that the test statistic $D*$ replaces D when ties occur in the ranks, which is the case for some of the estimates derived from the Lijphart approximation summary measure NL and Lijphart's own estimates of mean dimensionality, discussed later in this section. The null distribution of $D*$ is conditional and also approximately normal for large N, although the approximation has a slightly different expectation and variance from that of D. See Lehmann (1998, 294) for the formulas.

[24]The set of measures is produced by applying the summary measures N, NP, and NL to each of *seven* sets of cleavage salience, which are calculated using the original country–time variant and invariant methods as well as the five new methods mentioned at the beginning of this section. This yields 21 cross-sectional time series estimates of dimensionality. The average of each is then taken over time for each of the 24 countries.

[25]In fact, the p-values of each test are less than 0.0100 for all except five pairs, the largest of which is 0.0147.

[26]Recall from Chapter 2 that Lijphart's measure is not reliable. However, based on descriptions of his procedure, the measure can be said to average over time (specifically, over the post-war period). Note, though,

Polity	N_i	NP_i	NL_i	N_v	NP_v	NL_v	ENID[a]	LIJP[b]
Austria	2.42	1.37	1.20	2.46	1.46	1.30	2.74	1.5
Belgium	2.80	1.85	1.68	2.83	2.00	1.74	2.95	3.0
Denmark	2.25	1.32	1.20	2.24	1.32	1.20	2.74	2.5
Finland	2.47	1.32	1.13	2.47	1.32	1.13	3.01	3.5
France	2.80	1.62	1.50	2.85	1.77	1.68	3.10	2.5
Germany	2.66	1.53	1.46	2.65	1.54	1.50	2.78	3.0
Greece	3.25	1.37	1.50	3.42	1.47	1.67	3.07	1.5
Iceland	2.08	1.19	1.03	2.08	1.19	1.03	3.04	2.0
Ireland	2.02	1.16	1.06	2.03	1.15	1.06	2.82	1.5
Italy	2.29	1.27	1.14	2.36	1.33	1.21	2.93	3.0
Luxembourg	2.55	1.39	1.17	2.67	1.50	1.33	2.77	2.0
Netherlands	2.69	1.48	1.34	2.88	1.65	1.50	2.83	3.0
Norway	2.57	1.38	1.29	2.71	1.51	1.36	2.70	3.0
Portugal	2.83	1.26	1.22	2.97	1.32	1.28	2.95	2.5
Spain	2.94	1.31	1.14	3.11	1.46	1.50	2.79	2.5
Sweden	2.22	1.24	1.15	2.22	1.24	1.15	2.46	2.5
UK	2.35	1.35	1.23	2.53	1.47	1.30	3.07	1.5

Table 4.6: Mean estimated dimensionality in 17 countries using eight measures. Average is taken over time for the six cross-sectional time series measures introduced in this chapter: N_i, NP_i, NL_i, N_v, NP_v, and NL_v. The seventh and eighth estimates of mean dimensionality, ENID and LIJP, are published and informal averages, respectively.

[a] Published in Nyblade (2004, 26).

[b] Published in Lijphart (1999, 80–1).

Some of the data from Table 4.4 is reproduced here.

It should be apparent from Table 4.6 that neither Nyblade's (2004) nor Lijphart's (1999) measures closely resemble the measures developed in this chapter. Significant differences in the relative mean dimensionality estimated for each country are evident. For example, of the seventeen countries appearing in Table 4.6, Iceland has the second smallest particized ideological space according to the six measures developed in the prior section. Conversely, according to Nyblade's measure, it has the fourth *largest* space and according to Lijphart's it falls somewhere in the middle. Cross-national variation is also attenuated using Nyblade's measure, as is evident from Table 4.6. His estimates of mean dimensionality range from 2.46 to 3.10 while the measure yielding the smallest range of estimated mean dimensionality presented here, NL_v, ranges from 1.00 to 2.04. Further, leaving Table 4.6, the distribution of his cross-sectional time series estimates seems to have a much narrower spread than the distributions of the cross-sectional time series estimates presented here. The former range from 2.1 to 3.6 (Nyblade 2004, 13) while the measures with the narrowest range developed in the prior section, NL_v and NP_v, yield estimates that range from 1 to 3.

This analysis of the measures' comparability can be made more rigorous. A quick-and-dirty calculation of the correlations between the mean estimates is a start. The largest correlation (in terms of the absolute value of the Pearson correlation coefficient) between either Nyblade's or Lijphart's estimates and any of the estimates developed here is 0.36 and the smallest 0.062. This evidence supports the impression one takes away from Table 4.6 that the linear association is not strong. (Note, by the way, contra Nyblade (2004), that his and Lijphart's estimates are also only weakly related: the correlation coefficient is a mere -0.14.) Non-parametric rank tests confirm that the measures do not agree about the relative average dimensionality of the ideological space in these seventeen countries. We fail to reject the null hypothesis of independence between Nyblade's mean estimates and each of the six sets of mean estimates developed here at conventional levels of significance for the alternative hypothesis of a relationship. So too is the null hypothesis not rejected for the relationship between Lijphart's mean estimates and those developed here. For example, the smallest p-value for one of the former tests is 0.20 and the latter 0.16; the largest are 0.65 and 0.76, respectively.

From one perspective, this is disheartening news. From another, though, it is not. Lijphart's measure of average dimensionality, the reader may recall, suffers from a lack of reliability and the estimates from coding bias. Nyblade's measure, which the reader may also recall was discussed in Chapter 2, is the product of several methodological decisions with which this thesis has respectfully taken issue. That is, if we are not confident in either measure, we should not worry about their lack of correspondence to the measures presented here. And as has hopefully been amply argued in this and the prior chapters, there are many reasons why we should not vest much confidence in either Nyblade's or Lijphart's measures.

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that he does not formally average a set of time- or election-specific measures for each country; rather, he informally averages by considering a cleavage's importance over the post-war period when impressionistically assigning it a score.

4.2 Latent Cleavages

We now turn to new measures of the latent cleavage structure. Like the measures for particized cleavages introduced above, they are theoretically driven and simple. The motivation is to capture not just one source of latent preference diversity but many. This responds to the criticisms leveled against existing approaches in Chapters 2 and 3, which unfortunately combine at most two types of sociological divisions: religious and ethnic (e.g., Collier and Hoeffler 2000, Annett 2001). However, in the electoral and party systems literature, all operationalizations of latent preference diversity solely tap one cleavage, usually ethnicity. The problem with this approach is that measures of latent diversity based on indicators of different latent cleavages—ethnic and religious fractionalization, for example—may send very different messages about a country's likelihood of politicized and particized preference diversity.

The operationalization proposed here assesses the latent potential for politicized and particized conflict along *all* of the cleavages that comparative politics has viewed as important fault lines. One such set of cleavages was identified in the previous section. It includes both sociological (sticky) cleavages such as ethnicity and non-sociological (less sticky) cleavages such as foreign policy. Specifically, the seven cleavages identified were socio-economics; religion; urban–rural; post-materialism; culture–ethnicity; foreign policy; and democracy–authoritarianism. As discussed in Chapter 2, for sociological (sticky) cleavages, the potential for politicized and particized conflict is usually viewed as a function of societal homogeneity or heterogeneity along the cleavage, expressed as either fractionalization or the related effective number of groups. Conversely, for non-sociological (less sticky) cleavages, an equivalent natural measure does not exist; instead, measures must be developed on a case-by-case basis. Either way, this section develops a measure that represents the potential for conflict around each of the seven cleavages. The larger the value of the measure, or so most theories in the electoral and party systems literature go, the more likely the politicization and particization of the cleavage. The seven measures are then combined to create a measure of overall latent preference diversity. More will be said later about the method of combining different indicators. For the moment, though, the first task is to describe the measure of latent cleavage salience chosen for each of the seven cleavages.

As just alluded to, for the religious and cultural–ethnic cleavages, natural measures of the potential for religious and ethnic conflict in a society are its religious and ethnic diversity. Several lists of ethnic and linguistic groups have been drawn up by different scholars (e.g., Taylor and Jodice 1983, Alesina et al. 2003, Fearon 2002) as have lists of religious groups (e.g., Alesina et al. 2003, Annett 2001, Fearon and Laitin 2003*b*). Of the three well-known measures of diversity, F (the index of fractionalization), N (the effective number), and $\log(N)$ (the logged effective number), F is preferred due to both of the latters' relatively skewed distributions. However, the less well-known polarization index of Montalvo and Reynal-Querol (2000) can also be used. For theories that view conflict as more likely when there are large (near majority) groups or groups of equal size (e.g., Horowitz 1985), the polarization index is a better measure than the index of fractionalization, as it assigns the highest values to such situations. Conversely, the index of fractionalization assigns the highest values to very heterogeneous polities: at the extreme, to a polity where each individual comprises his or her own group. Of the various lists of groups and their population shares, Alesina et al.'s (2003) are preferred primarily for their greater sample size. There

is also something to be said for having had the same coders constructing the list of groups for both religion and ethnicity. Additionally, these lists of groups may be relatively more exogenous: Fearon's (2002) list of ethnic groups, the reader may recall, is based in part on the list of politicized groups compiled by Scarritt and Mozaffar (1999). Both ELF and Alesina et al.'s (2003) list of linguistic groups seem more narrow in focus than is called for given the cleavage definition (cultural–ethnic) used here, which does not restrict attention to linguistic conflict. Nevertheless, any of the lists of groups can and will be used in subsequent analyses as part of a sensitivity analysis.

With respect to the remaining five cleavages, we now move into relatively uncharted waters. While the measures proposed below should by no means be viewed as the final word on the subject, they will hopefully serve as useful preliminary measures that will spur further research. Each cleavage is discussed in turn.

First, the urban–rural cleavage. Lipset and Rokkan (1967) argue that the urban–rural conflict has historically been significant during a country's transition phase (i.e., during industrialization, prior to agriculture's eclipse by industry). By extension, a latent urban–rural conflict should only be said to exist in polities where rural areas still wield a reasonable amount of political and economic power. Only when and where rural, agricultural citizens are not marginalized relative to urban, industrialized ones may conflict around this division emerge. In a sense, this is akin to measuring the latent urban–rural cleavage by assessing a polity's urban–rural diversity in terms of political and economic power. Three reasonable indicators of the salience of this latent cleavage are the percentage of the population that is rural; the percentage of employment that is in agriculture; and agriculture's value added as a percentage of GDP. All three of these measures tap the economic or political power of the rural sector. Luckily, the World Bank Development Indicators (World Bank Group 2002) contains data on all three of these measures for a large number of polities. The percentage of the population that is rural seems to be the most straightforward measure and hence preferable to the others.

Second, the socio-economic cleavage as it has been defined here should be most intense in polities characterized by substantial inequality. This is perhaps one of the two most problematic cleavages to operationalize, though. With welfare state retrenchment increasingly viewed as necessary in today's economic, demographic, and technological climate, even very egalitarian polities could experience severe conflict over what, if any, changes should be made to existing levels and patterns of public service provision. Nevertheless, there should be something to the notion that inequitable polities such as Brazil are more likely to experience socio-economic conflict (particularly the full-fledged, old fashioned kind!) than egalitarian polities such as Finland. Along these lines, possible indicators of a latent socioeconomic cleavage include the Gini coefficient; the income share of the highest ten or twenty percent of the population; and the income share of the lowest ten or twenty percent of the population. The Gini coefficient seems to contain the most information (it subsumes the other two measures) and is accordingly preferred here. Again, the World Bank Development Indicators (World Bank Group 2002) contain this data for a large number of polities.

Third, the foreign policy cleavage. There are many ways in which the likelihood of conflict around foreign policy could be operationalized, partly due to the fact that this ideological cleavage is defined to have somewhat of a catch-all nature. Next to socioeconomics, it is the most difficult cleavage to operationalize. Nevertheless, a starting point is the observation that the most virulent and important foreign policy conflicts are likely to

revolve around a polity's military entanglements. Since going to war represents the ultimate commitment a polity can make with respect to an international issue, such decisions have been and should continue to be of great political import domestically. For example, France's Algerian crisis, the Vietnam War in the United States, European and U.S. participation in UN peace-keeping missions in Bosnia, and Thatcher's Falklands War were all important issues related to this ideological cleavage that became political faultlines in the respective polities. Further, the more military engagements, the stronger the signal that a polity is engaged internationally (with the exception of polities such as Japan that are pledged to pacifism). Ergo, a first cut at operationalizing the latent foreign policy cleavage is a measure of a polity's propensity to engage in inter-state warfare. The percentage of the 1945–97 period in which a polity was engaged in wars with other states is one such measure. This variable is calculated using the Correlates of War's Inter-State War data set, which contains information on the participants in and duration (in days) of interstate wars from the 1800s through 1997 (Sarkees 2000).[27] Note, though, that this measure will underestimate the potential for conflict around foreign policy: while inter-state military conflict is an important set of issues related to the cleavage, it is not the only set. For example, controversy over membership in and the future direction of the European Union in European polities will not be predicted by this measure. Likewise, it will not predict the high salience of foreign policy in polities such as Germany that were on the front lines of the Cold War but that never actually engaged in direct hostilities. Trade openness, membership in international organizations such as NATO and the EU, and defense spending are all potential indicators that future work may want to consider using.

Fourth, the democratic–authoritarian cleavage is obviously operationalized by a dummy variable for a transition to democracy from an authoritarian regime during the post-war period. This measure can be derived from the data set of Alvarez et al. (1999).

Fifth and finally, the post-materialist cleavage. As with the democratic–authoritarian latent cleavage, there is an obvious choice to operationalize it: in this case, income (gross domestic product). This is in keeping with Inglehart's (1984) argument that post-materialism should only emerge at high income levels. However, this operationalization poses problems relative to the others because of the radically different scale of the measures. While the others all fall in the interval $[0, 1]$, the range of GDP is larger by several (approximately a dozen!) orders of magnitude. An alternative operationalization is a step function that assigns a value of 1 to countries the World Bank defines as high income; 0.5 to countries defined as middle income; and 0 to countries defined as low income.[28] The simplest and probably most theoretically accurate approach, though, is to construct a dummy variable for high income countries as defined by the World Bank. As before, this information is available from World Bank Group (2002).

[27] Other options include a dummy variable for participation in an external or internal war over the post-war period or the percent of the post-war period in which a polity was engaged in an external *or internal* war. Data on both of these variables is available from Banks (1979) as updated and used in Barro and Lee (1994), although only for the period 1960–85. A similar measure can be constructed over a longer period of time using data from Alvarez, Cheibub, Limongi and Przeworski (1999), which is based on Correlates of War data sets. However, internal wars may often relate to other cleavages such as ethnicity or religion, which makes the use of such well-known indicators as these problematic.

[28] The World Bank defines high income countries as those having a per capita Gross National Income of $9,075 or greater; middle income countries as those having a per capita GNI between $735 and $9,075; and low income countries as those having a per capita GNI of less than $735, all GNIs calculated in 2002.

Having identified measures of latent cleavages, which themselves represent the likelihood of political and/or particized cleavages emerging along the respective fault lines, the next task is to combine the various measures into an overall measure of a polity's latent preference diversity. Two approaches present themselves. The first is the commonplace additive index. However, additive scales suffer from a certain degree of arbitrariness: often without theoretical justification, they weight all indicators equally; require the measure to be one-dimensional; and increment contributions linearly. Alternative approaches to the additive index are advocated by Treier and Jackman (2003). Statistical procedures can instead be used to combine the information in multiple indicators of an abstract concept such as latent preference diversity, allowing "the data [it]self [to] speak to these issues" (Treier and Jackman 2003, 8). For example, Treier and Jackman use an item response model to combine indicators of democracy from the Polity IV project and arrive at a summary measure of the latent variable of democracy. Simpler data-driven methods that could be used to combine indicators are principal components and factor analysis. The latter is more appropriate in this case since we are interested in estimating the value polities take on a latent dimension, preference diversity. One advantage of item response modeling over these older, non-Bayesian methods is that it allows the estimation of measurement error in the estimated latent scores (Treier and Jackman 2003), uncertainty that can then be propagated through subsequent analyses. While principal components and factor analysis allow analysts to estimate the dimensionality of their data and thus may represent an improvement over the naive additive index, the best technique currently available for eliciting actual scores instead of dimensionality is undoubtedly item response modeling.

Despite the many advantages of an item response model, the thesis employs only an additive index and principal factor analysis to estimate the latent quantity of preference diversity for a set of countries. Quite simply, item response modeling is too time intensive of a technique for this thesis. Future work should revisit the issue. As far as the use of an additive index goes, Treier and Jackman's (2003) otherwise valid criticisms of this naive technique do not have as much resonance in this particular case. Theory suggests, for example, that all indicators should be weighed equally. At any rate, if unequal weights are to be applied, it should be on the basis of theory (e.g., down-weighting post-materialism and democratic–authoritarianism due to the relatively short time period in which these two cleavages are relevant), not the data. Also in favor of the additive index is the fact that the dimensions emerging from a factor analysis are often hard to interpret. Note that the assumption of multivariate normality required for maximum likelihood factor analysis is violated by this data, so principal factor analysis is used instead.[29] The thesis's preference, in sum, is for the additive index. Principal factor analysis is used more as a check on the additive index than out of a real belief that the data should be allowed to speak to the issue of how the different indicators should be combined.

Table 4.7 displays the preferred indicator of each latent cleavage and three overall measures of latent preference diversity for a sample of the twenty-four countries analyzed in the

[29]Two variables are binary: the dummy variables for high income countries and for regime change during the post-war period. As a result, the seven variables cannot be distributed multivariate normal. Principal factor analysis, like principal components, requires no such assumption. It merely employs the spectral decomposition of the modified correlation matrix, where estimates of communality (here, the coefficients of multiple determination from a regression of each variable on the remaining six) replace the 1's on the diagonal.

prior section. Recall that multiple indicators were suggested above for some latent cleavages, such as the socioeconomic and urban–rural cleavages. In these two cases, the various measures are highly correlated. A principal components analysis reveals that the multiple indicators of each such cleavage load onto one component, which accounts for most (80% and up) of the variation in the indicators. While we could use principal factor analysis to construct a composite variable for these cleavages and others with multiple quantitative indicators, it seems just as plausible to allow theory to dictate which of the indicators to use. Accordingly, the theoretically-preferred indicator is displayed in Table 4.7 and used in the construction of the overall measures of latent preference diversity. The other indicators for a cleavage have a role to play as well, though: they can be employed in sensitivity analyses. Of the three measures of latent preference diversity shown in Table 4.7, two are additive indices that each weight the cleavages equally, although one of the two uses standardized data. The third is the set of factor scores resulting from a principal factor analysis.[30] In this analysis, the indicators of the foreign policy, religious, and post-materialist cleavages loaded positively on the factor and the remaining indicators negatively. The indicator of the post-materialist cleavage has the largest standardized loading (0.888), followed by the democratic–authoritarian cleavage (-0.719). Neither religion nor foreign policy load strongly on the factor (the loadings are 0.113 and 0.147, respectively). The remaining cleavages have moderately high loadings (circa -0.500).

What Table 4.7 hopefully makes clear is that measuring latent preference diversity with respect to only one cleavage such as culture–ethnicity or socio-economics can paint a very misleading picture. Some countries are religiously but not ethnically diverse (e.g., Japan) while others are ethnically but not religiously diverse (e.g., Belgium). Some have salient latent foreign policy cleavages (e.g., the United States), some salient latent democratic–authoritarian cleavages (e.g., Spain), and some neither (e.g., Iceland), and so on and so forth. Equating a country's latent preference diversity with the latent salience of one cleavage certainly underestimates the quantity of interest, a flaw of existing measures. Further, with different indicators conveying different messages, the conclusions that we draw about the relationship of latent preference diversity to political outcomes are likely to vary with the indicator used. The composite measures and estimates presented here represent an improvement over those currently in use. While the new measures are still far from perfect, they at least take into account a wider array of latent cleavages; as such, they should have greater validity.

[30] Both standardization and the principal factor analysis were performed on a set of 66 countries: all polities that experienced at least one democratic election in the post-war period according to Alvarez et al. (1999) and for which all variables were observed. This time series cross-section data set will be described in more detail in Chapter 5. The principal factor analysis was conducted in `R` using my own code, as I am not aware of any built-in functions or contributed packages that implement this statistical technique in `R`. The `factanal` function in `S-PLUS` does offer users the option of principal factor analysis, however, and similar results (differing only in sign) were obtained using this function and statistical package. One factor was fitted to reflect the theory that the latent concept of preference diversity is one dimensional. Further, only one iteration was performed. (Multiple iterations in `S-PLUS` did not yield very different results.) The factor scores produced are regression scores, calculated as follows:

$$\hat{\mathbf{F}} = \mathbf{Z}\mathbf{R}^{-1}\mathbf{L} \ ,$$

where $\mathbf{Z}$ is the matrix of standardized data, $\mathbf{R}$ is the correlation matrix, and $\mathbf{L}$ is the matrix of standardized loadings, i.e. the eigenvectors of the correlation matrix multiplied by the square root of the respective eigenvalues.

Polity	Rural Population (%)[a]	Gini Coefficient (%)[b]	Income Level[c]	Ethnic Polarization[d]	Religious Polarization[e]	Democratic Transition[f]	Post-war Days at War (%)[g]	Latent Diversity, Additive Index[h]	Latent Diversity, Stand. Index[i]	Latent Diversity, Factor Score[j]
Australia	16.9	35.2	1.00	0.178	0.564	0.00	20.2	2.44	0.67	1.11
Belgium	4.61	25.0	1.00	0.873	0.423	0.00	4.85	2.64	-1.95	1.06
Denmark	17.9	24.7	1.00	0.196	0.467	0.00	0.00	2.09	-4.56	1.24
France	27.9	32.7	1.00	0.212	0.887	0.00	5.44	2.76	-0.218	1.14
Greece	44.7	35.4	1.00	0.291	0.296	1.00	4.85	3.44	0.366	0.571
Iceland	2.08	30.0	1.00	0.153	0.383	0.00	0.00	1.96	-4.84	1.19
Israel	12.9	35.5	1.00	0.631	0.652	0.00	4.40	2.81	-0.411	1.00
Japan	25.8	24.9	1.00	0.0239	0.937	0.00	0.00	2.47	-2.64	1.32
New Zealand	17.3	36.2	1.00	0.644	0.594	0.00	0.00	2.77	-1.21	0.972
Portugal	62.2	38.5	1.00	0.0919	0.288	1.00	0.00	3.39	-0.181	0.535
Spain	2.94	32.5	1.00	0.678	0.873	1.00	0.00	4.17	2.41	0.626
Sweden	18.6	25.0	1.00	0.116	0.468	0.00	0.00	2.02	-4.78	1.26
Switzerland	41.4	33.1	1.00	0.748	0.907	0.00	0.00	3.40	1.47	0.938
UK	11.5	36.0	1.00	0.226	0.766	0.00	6.56	2.53	-0.969	1.13
US	25.8	40.8	1.00	0.703	0.557	0.00	21.7	3.14	4.00	0.832

Table 4.7: Indicators of latent cleavage salience and three measures of latent preference diversity for fifteen countries and seven cleavages.

[a] Based on data from World Bank Group (2002, Series SP.RUR.TOTL.ZS)
[b] From series World Bank Group (2002, Series SI.POV.GINI) with the exception of Iceland (McMahon 2000)
[c] World Bank Group (2002)
[d] Based on data from Alesina et al. (2003)
[e] Based on data from Alesina et al. (2003) with the exception of Israel, for which see footnote 26
[f] Alvarez et al. (1999, ACLP variable "Unstable")
[g] Based on data from Sarkees (2000)
[h] Sum of columns 2–8
[i] Sum of standardized columns 2–8
[j] Regression score from principal factor analysis

4.3 Final Remarks

This chapter has developed measures and presented estimates of an important source of cross-national variation: the aggregate preferences of a country's inhabitants. It has demonstrated that what political elites want from the political process, embodied in the manifestos written by the political parties that they lead, varies from country to country and over time, although there are also striking cross-country and -time similarities. In the twenty-four countries studied, one type of conflict is ubiquitous at the elite level: socio-economics is everywhere a defining feature of competition between political parties. Issues relating to conflict between the 'haves' and the 'have nots', between the advocates of big and of small government, dominate the political agenda in most countries. In some countries and time periods, however, conflicts of a different nature share the limelight with socio-economics. Culture and ethnicity, in particular, form the basis of virulent and long-lasting political divisions in a significant minority of polities. Foreign policy is a second close competitor in some countries for dominance of the political agenda; in one, Israel, it is preeminent for a substantial interval of time. As a result, while the ideological space in which political parties situate themselves is effectively one dimensional in many countries, it is distinctly multi-dimensional in others. This chapter, in conclusion, provides evidence that not only does the nature of the salient particized ideological dimensions or cleavages vary across time and space, but that so too does their number. Further, the estimates that comprise the evidence are suitable for inclusion in quantitative analyses.

The chapter also developed indicators of the latent salience of each of the seven historically important cleavages identified. A latent cleavage is salient if it is viewed as having a reasonable probability of being politicized or particized. For sociological cleavages, salience is indicated by social heterogeneity along the cleavage; for non-sociological cleavages such as foreign policy, other indicators such as the proportionate duration of a country's military engagements are used to tap the likelihood of conflict along the dimension. A country's overall latent preference diversity is then the composite of the cleavage-specific indicators of salience. Here, too, there is much cross-sectional variation. Due to the paucity of time series data on many indicators, though, estimates of latent preference diversity are long term. That is, they represent an average over the post-war period and do not measure cross-time variance. At any rate, because latent sociological cleavages in particular should change slowly over time, most countries have likely experienced little change in latent preference diversity over this period. What change there has been should be most evident when comparing periods separated by large spans of time, such as the 1950s and the 1990s.

Questions about the relationship between preferences and party systems naturally arise from an examination of the empirical data presented in this chapter. For example, one might be surprised by the estimated dimensionality of the particized ideological spaces in the United States and Finland: according to the measures developed here, the dimensionality of the former is high and the latter low. These empirical estimates must be contrasted with Lijphart's (1990*b*), who coded the United States as having only one 'issue' dimension and Finland as having three and a half. Lijphart (1984, 1999) and Taagepera and Grofman (1985) then used the latter estimates to obtain high correlations between the number of particized cleavages and the effective number of legislative parties, as was initially discussed in Section 2.3.1 of Chapter 2 and throughout Chapter 3. In short, this chapter's estimates of the dimensionality of the particized ideological space seem to contradict these

scholars' hypothesis regarding the relationship between the effective number of parties and the dimensionality of the ideological space. Similarly, an inspection of the estimates of latent preference diversity suggests that empirical support for the hypotheses posed by Cox (1997) is less than forthcoming. Polities such as Denmark and Finland with non-restrictive electoral systems and little latent preference diversity nevertheless have a large effective number of parties. Of course, the matter quickly becomes complicated enough to qualify it as the subject of the next chapter.

In closing, a few words seem called for about the hypothesis implicitly posed by Lijphart et al. and explicitly by this thesis in Chapter 3 that restrictive electoral systems constrain the emergence of particized cleavages. At first glance, the evidence presented here—that both polities with non-restrictive (e.g., Israel) and polities with restrictive (e.g., the United States) electoral systems possess multi-dimensional particized ideological spaces—does not support this hypothesis. However, as noted in the first section of the chapter, the methodology employed by the thesis to estimate the nature and number of a polity's particized cleavages does not allow for orthogonal cleavages to be parceled out from non-orthogonal (overlapping) ones. That is, although the political agenda in the United States is more pluralistic than we might have expected given its electoral system, the secondary and tertiary foreign policy and cultural–ethnic cleavages identified may overlap with each other and the dominant socio-economic cleavage. The effective dimensionality, in other words, may be much lower than the raw dimensionality. The inability to discriminate between cleavages in this way is an unfortunate drawback of the approach adopted by the thesis. Here, too, though, matters quickly become complicated. Hence, a full discussion of where particized and politicized cleavages come from—in other words, their endogenization—is deferred until Chapter 6.

Chapter 5

Revisiting Preferences and Party Systems

We now return to the topic of Chapter 3: how preferences relate to party systems. Chapter 3 drew attention to the underdevelopment of theory relating what the literature terms 'social cleavages' or 'issue dimensions' to the size-weighted number of parties or candidates competing in elections. It also identified methodological flaws in existing empirical studies that undermine the conclusions they draw, conclusions that to date have been accepted almost uncritically by the electoral and party systems literature. In fact, Chapter 3 argued that measurement error of the preferences variable (whether latent or particized) combined with poor modeling and estimation choices leave us without valid empirical tests of theories.

This chapter returns to the theoretical drawing board. It builds upon the existing literature by asking how the latent, politicized, and particized cleavage structure of a country relates to the number of competitors in elections. Competitors here may be either party labels in legislative elections or candidates in elections for separately-elected executive office. It is worth noting that the theory developed applies to the aggregate level of analysis: to electoral competition in the country as a whole (the national level), not to competition in the district. This focus follows the bulk of existing theoretical and empirical studies but is not without peril. Obvious problems with this conventional approach, particularly with testable hypotheses and variable operationalizations, are discussed below. It may be advisable for future work to break with tradition and take a district-level tack. A final comment is that the theory developed is not a formal model. Rather, it is a verbal sketch that should be amenable to formalization at a later date by those whose skills lie in this area.

To preview the argument, the thesis makes the case for a non-linear relationship between preference diversity, whether politicized or particized, and the number of parties or candidates competing in elections. Adding new political cleavages or ideological dimensions will eventually cease to encourage the formation of new political parties. At the micro-level, the supply side—the role of political entrepreneurs—is emphasized. This should be contrasted to the linear, demand-side hypotheses currently on the table. Turning from theory to empirics, the chapter then develops testable hypotheses in order to empirically assesses the hypothesized relationships. New time series cross-sectional data sets and the measures developed in Chapter 4 are used in the empirical analysis. The sensitivity of statistical and substantive conclusions to model specification is investigated, an empirical issue that

is too often ignored in the literature. Together, these empirical improvements over existing studies allow conclusions to be drawn with greater confidence.

At the end of the day, the data suggestively but not statistically support the hypotheses. In general, statistical relationships are weaker than expected, particularly for particized preferences. Statistical strength also evaporates when moving beyond the Beck and Katz (1995) estimation strategy of ordinary least squares combined with panel-corrected standard errors, as seems the correct approach for each empirical model estimated in the chapter. It suffices to note that the models chosen here are the most conservative of the feasible options, both statistically and substantively.

5.1 Theory

We begin with the relationship between latent or politicized cleavages and the party system. For all of the reasons discussed earlier, it is difficult to offer a causal theory that relates latent preference diversity to party systems. As a result, the theory relates politicized preferences to party systems. By viewing latent preferences as reasonably correlated—however incorrectly, a topic addressed by Chapter 6—with politicized preferences, the theory can be divested of its causal status and the variable of latent preferences substituted for politicized preferences on the right-hand side. In effect, latent preferences serve as an instrument for politicized preferences. This allows for predictions to be made about the effect of changes in political institutions and/or politicized preferences on party systems, since politicized preferences themselves are difficult (in fact, currently impossible, as Chapters 2 and 4 argued) to measure. However, the use of latent preferences in this manner is not likely to produce a powerful predictive model.

Drawing from existing theories, the macro-level argument in a nutshell explains the size-weighted number of parties or candidates primarily using two variables: electoral system restrictiveness and the number of cleavages. With respect to the latter, the implicit right-hand side variable is the number of politicized groups. Recall the cleavage structure of a country as defined in Chapter 2. Adding cleavages generates more groups, unless the cleavages are overlapping. However, a given cleavage can generate any number of groups, so a country with only one cleavage—say, religion—may have more groups—say, Shi'i Muslims, Sunni Muslims, Catholics, evangelical Protestants, mainstream Protestants, Jews, and agnostics—than does a country with two cleavages—say, religion and ethnicity, with the groups of white Protestants, white Catholics, black Protestants, and black Catholics. Generally speaking, though, each cleavage usually generates only a limited number of groups. The general proposition is thus the more cleavages, the more groups, keeping in mind that this proposition expresses only a probabilistic tendency for the reasons discussed above. Since it is often more difficult to identify specific groups along a cleavage than the salience of a cleavage itself, as discussed in Chapter 2, it seems sensible to focus on the cleavages themselves. The explicit variable, then, is the number of cleavages, which the thesis has elsewhere called 'diversity'.

Various political institutional variables flesh out the right-hand side. Chapter 3 painted elections as coordination games. The amount of coordination required to win in the election at hand is determined by a political institution, the second right-hand side and first political institutional variable. This variable is the applicable electoral system. The winning threshold is established at the district level by the magnitude and electoral formula;

at the national level, it is conventional to take the mean or median of the former. If this threshold is high as in an electoral system with single member districts and a majoritarian electoral formula, groups must engage in pre-electoral coordination to build a coalition that can command votes in excess of the threshold. If it is low as in most electoral systems with multi-member districts and a proportional representation electoral formula, little or no pre-electoral coordination is necessary. Henceforth, the former type of electoral system will be referred to as restrictive and the latter as permissive. But what about other political institutions? The gains from coordination—the benefits that political power can bring—are also a function of institutions. Now, though, the political institution of interest is the regime type. The more horizontal and vertical centralization, the bigger the political prize to be captured in national-level elections. Whether political power is desired for the accompanying perks of office or for policy reasons, the regime type combines with cultural norms that place informal checks on the exercise of power to establish the benefits of electoral coordination, as well as the costs of failure.[1]

Thus far, the variables have been extracted directly from the existing theoretical literature such as Cox (1997), albeit with greater attention paid to the nature of the preferences (the stage in issue evolution and the relevant aspect of the cleavage structure) than is the norm. While the thesis continues to build upon current theories below, it also diverges from them in crucial respects regarding the nature of the micro- and macro-level relationships.

The micro-level pieces of the puzzle are put together first since it makes the macro-level argument more comprehensible. Political entrepreneurs, motivated either by the rewards of office, by policy, or by both (Strom 1990), will supply political representation to politicized groups in the form of either candidates or parties when there is a strategic incentive for them to do so.[2] Similarly, political elites will either grant to or withhold resources from political entrepreneurs strategically. Political parties, in other words, are endogenous institutions (Aldrich 1995). Of course, elite behavior of both sorts heavily anticipates the behavior of the masses (voters), who in turn strategically support candidates or parties when election day rolls around. The focus here is on political elites for two reasons: first, elites make the first move in the coordination game (Cox 1997, 26–7, 29–30, 151–72); second, elite behavior is more amenable to rational choice analysis than is mass behavior (Fiorina 1995). Emphasizing the supply instead of the demand side distinguishes this account from existing accounts such as Cox's (1997). Parties do not miraculously appear to take up the interests of a group of individuals; they are created by rational entrepreneurs seeking to further their own interests.

All of this thus far suggests a simple theory: the more cleavages, the more parties, controlling for the restrictiveness of the electoral system. However, since parties are created to further either the office or policy interests of entrepreneurs, there is a point beyond which entrepreneurs will have little incentive to supply political representation to groups created by

[1] Cox (1997) originally makes the point that the power of the national-level prize of executive office drives cross-district linkages (party system aggregation). However, he never fully develops the theoretical argument and it does not make its way into his empirical model. Chhibber and Kollman (2004) take up the point with respect to vertical centralization both theoretically and empirically, the latter of which consists of case studies of India, the United States, Canada, and the United Kingdom. The role of horizontal centralization remains unexplored in the literature.

[2] More will be said about political entrepreneurs in Chapter 6. They not only play a critical role in creating political parties or candidacies but also shape the political cleavage structure itself, either subsequent or antecedent to supplying political representation.

the introduction of additional cleavages. What may be called the minimum size principle dictates that sufficiently diverse polities will contain groups that are too small to wield political power in a democracy, even if they can win representation in a legislature under a sufficiently permissive electoral system. Posner (N.d.) has employed a similar argument to predict which political cleavage will structure competition under a single member district, plurality electoral formula electoral system: the one that generates a minimum winning coalition. Ergo, all else being equal, adding new cleavages will eventually induce pre-electoral coordination and party system consolidation, not party system fractionalization.

A brief example may help to clarify the argument. Consider two countries, A and B, the former of which has a single cleavage and the latter of which has two cleavages. Assume momentarily that each cleavage generates two groups roughly at parity and that the countries are alike in all other respects. If, for whatever reason, a new political cleavage appears amongst the citizenry in country A, it is plausible to think that entrepreneurs might form new parties to take up the issues associated with the new cleavage. Say that the four new groups command support from approximately 30 %, 25 %, 25 % and 20 % of the electorate. Given a permissive electoral system, all are large enough to be able to wield political power, either as a minority government of sorts or in coalition with others (if the regime is parliamentary). Even with a fairly restrictive electoral system such as single member plurality, several of the groups may believe that they could obtain a reasonable plurality and choose not to enter into a potentially costly (in terms of the concessions that must be made) pre-electoral coalition. Hence, one might very well suppose that the original two party system will be transformed into a four party system following the appearance of a new political cleavage, particularly if the electoral system is permissive.

Turning to country B, it is less plausible to think that the introduction of an additional political cleavage will lead to the formation of new parties. Say that the original four groups command support similarly to the new groups in country A, each of which an entrepreneur might view as satisfying the minimum size principle and thus viable. Four party competition is a plausible scenario for this political cleavage structure. However, adding a new cleavage will greatly reduce the chances of any of the resulting groups obtaining a reasonable plurality or being able to govern on its own: each group might command as little as 12 % of the electorate's support. In a country with such a high level of diversity, pre-electoral coordination will certainly take place even under a permissive electoral system: entrepreneurs have an interest in constructing a viable electoral *and* governing vehicle. The coalitions that are subsequently built may be broader than the original four group-based coalitions, resulting in fewer electoral competitors following than prior to the appearance of the new cleavage. Even if the situation is less dire such as a new cleavage that splits one of the original four groups in half (say, with each of the two daughter groups now commanding support from 10 % of the electorate), coordination will likely join each of the daughter groups in a coalition with one of the original, larger groups, yielding three instead of four political parties or candidacies.

In other words, the introduction of new cleavages in sufficiently diverse countries is likely either to have no impact on the number of competitors—i.e., the same parties re-structure their bases of support—or to encourage further consolidation. While it is not impossible that pre-electoral coordination might produce five or six parties instead of the original four in the above example, the argument here is simply that it is unlikely. Further, as the existing level of diversity increases, it becomes less likely that the party system

continues to fragment. Conventional arguments such as Cox's (1997) that the number of cleavages (explicitly presented as the number of groups) is positively and linearly related to the number of competitors are nonsensical. Do we really think that adding groups will always add parties? At the extreme, with a perfectly fractionalized country where each person forms his or her own group, the number of parties equals the number of citizens. No interest aggregation is taking place. This is not democratic politics as we know it in the modern world, a costly situation for all of the reasons that have spurred the formation of political parties in the past (Aldrich 1995). The thesis breaks with the conventional literature, then, in arguing for a non-linear relationship between political cleavages and the number of electoral competitors. Increases in diversity from initially low levels of diversity will be associated with increases in the number of competitors, but as the initial level of diversity rises, the effect of an increase will either become negligible or be associated with a decrease in the number of competitors. Graphically, the relationship should take the shape of a concave parabola or, at minimum, a logarithmic curve.

A final complication concerns the nature of the relationship. The thesis retains Cox's (1997) argument that the effect of political cleavages upon the number of electoral competitors is conditional upon the electoral system. Restrictive electoral systems create such a need for pre-electoral coordination that the addition of new cleavages should have little effect. Certainly, the impact of an increase in diversity under a restrictive electoral system is likely to be less than under a permissive electoral systems, where the penalty for failing to coordinate is low to nil. However, while this argument seems plausible, we are not wedded to it. It may simply be the case that the effect of diversity is the same under both restrictive and permissive electoral systems, but that there is simply more coordination occurring under restrictive electoral systems.

To summarize, the theory predicts that countries with high diversity (many political cleavages) and a restrictive electoral system will have few electoral competitors due to the strategic incentives for coordination supplied by the latter. Similarly, countries with low diversity (few political cleavages) and a restrictive electoral system will have few parties or candidates competing in elections. Conversely, countries with high diversity and a permissive electoral system will have many electoral competitors, while countries with low diversity and a permissive electoral system will have few electoral competitors. However, at both extremes of diversity, matters become more complicated, particularly under permissive electoral systems. Very diverse countries are likely to have fewer electoral competitors than moderately diverse countries, all else being equal, as a result of the minimum size principle. At the other end of the spectrum, very homogeneous countries may have almost as many parties as their more moderately diverse counterparts, all else being equal. Because the stakes in coordinating are so low, coordination failure are endemic. That is, entrepreneurs are less likely to forgo the benefits of office and defer to other entrepreneurs seeking to represent the same loosely-defined group when there are few penalties for mounting a challenge.[3]

[3]Similar conclusions are drawn by Dickson and Scheve (2004), who develop a formal model of social group representation with respect to one cleavage under reasonably restrictive electoral systems (plurality and run-off separately elected executive elections). In very homogeneous polities, say where one group has a share of the population in excess of 80%, the dominant group is predicted to be represented by more than one candidate. Entrepreneurs compete for the benefits of leadership and office without fear of consequences ensuing from the failure to present a joint group front.

Two extensions or clarifications, depending upon one's point of view, follow. One extension applies to legislative elections in polities that do not have a single nation-wide electoral district. Electoral coordination occurs on two levels for such polities. At the district level, strategic behavior is aimed at winning election to the district's seat or seats; at the national level, it is aimed at wielding governing power, which necessitates forming cross-district linkages. In other words, district-level coalitions must first be created that command votes in (minimal) excess of the winning threshold established by a district's electoral system. These coalitions must then be broadened beyond the district to muster sufficient votes in the parliament or legislature to pass legislation and/or to uphold a government. In this situation, the theoretical relationship between political cleavages, political institutions, and party systems must be broken down into two parts. Diversity *in an electoral district* and the strategic incentives supplied by electoral system restrictiveness produce the district-level party or candidate system. The extent to which the same political cleavage structure obtains in each district combined with the political power of the institutional body being elected produces the national-level party system. Ergo, many electoral competitors on the national level may result from diverse but identical districts, from homogeneous but varying districts, or from a combination of the two.

The second extension applies to legislative elections in polities that also separately elect an executive, such as countries with presidential regimes like the United States. If the executive election is held simultaneously with or in reasonable proximity to the legislative election, it is reasonable to suppose that pre-electoral coalitions formed to contest the executive election will influence pre-electoral coalition formation in the legislative election (Shugart and Carey 1992, Cox 1997). Specifically, more coordination is likely to occur in an executive than in a legislative election when considered separately because relatively restrictive electoral systems are employed for executive elections. If this is indeed the case, a proximate executive election is likely to have a consolidating effect on the number of legislative competitors. If it is not, i.e. if for whatever reason a coordination failure occurs in the executive electoral contest, a proximate executive election is likely to increase legislative electoral fragmentation.

The theory developed so far as applies to latent and politicized cleavages. What about particized cleavages? The argument this thesis will make with respect to the latter is actually very similar. All else being equal, we expect countries with a higher dimensional ideological space (i.e., with more ideological dimensions or particized cleavages) to have more political parties or candidates competing in elections than countries with a lower dimensional ideological space, which is Taagepera and Grofman's (1985) and Lijphart's (1984, 1990a, 1999) argument (among others) plus the *ceteris paribus*. Here, however, the 'all else being equal' is expected to be critical, contrary to the existing literature. As before, restrictive electoral systems encourage pre-electoral coordination and discourage the entry of new parties. Permissive electoral systems, to the contrary, do not discourage new parties from entering. It certainly seems reasonable to predict that a country with several particized cleavages and a restrictive electoral system will only have a few parties, perhaps so few as to reduce the effective dimensionality below the raw dimensionality. Similarly, we might predict that a country with only one particized cleavage and a permissive electoral system will have few parties or that a country with several particized cleavages and a permissive electoral system will have many. However, as above, we do not expect a linear relationship between the number of competitors and the number of dimensions. Adding dimensions to an already

high dimensional space should eventually have diminishing (and ultimately negative) returns in numbers of competitors. Following Downs's (1957) argument, the ideological dimensions that structure political competition conserve information costs for voters. As complexity rises with dimensionality, political parties will eventually begin to bundle issues and hence dimensions together in order to bring the complexity confronting voters under control. Also as above, homogeneous countries with only one fundamental line of conflict defining competition between parties and a very permissive electoral system may nevertheless have many parties. Because there are so few incentives for coordination, entrepreneurs may compete to represent what are malleable (and hence manipulable) groups.

A few caveats are in order about this, and any, theory regarding the relationship between particized cleavages and the number of political parties competing in elections. Most have been raised elsewhere in the thesis but deserve reiteration here. Since a new party often attempts to put a new set of issues on the political agenda, as Chapter 6 will discuss at length, there is a chicken versus egg problem where entry of this sort is common. That is, should we say that an increase in the dimensionality of the particized ideological space led to an increase in the number of parties, or vice versa? Moreover, there is the endogeneity problem discussed in Chapter 3 (and returned to in Chapter 6): particized cleavages are endogenous to electoral systems and possibly to other political institutions. A proper test of the above hypothesis would involve estimation of a structural model, which is not possible without a measure of political cleavages. All in all, the left- and right-hand side variables in this hypothesis are causally entwined to a degree that is difficult to untangle.

5.2 Empirical Analysis: Latent Preference Diversity

We now turn to empirical matters. To what extent does the evidence support the theory developed above regarding the relationship between the number of latent cleavages, the informal instrument for political cleavages, and the party system?

Some suggestive cross-national evidence is presented below in Table 5.1. The mean effective number of electoral parties in lower house legislative elections and a measure of latent preference diversity developed in Chapter 4, the additive index, are shown for countries selected to encompass a range of electoral systems. The order corresponds to decreasing electoral system restrictiveness, which is operationalized as the average lower tier district magnitude, averaged in turn over time.

It is obvious that as one moves down the table, i.e. to increasingly permissive electoral systems, the effective number of electoral parties increases, supporting the hypothesis that restrictive electoral systems encourage pre-electoral coordination. It is also generally the case within each group of electoral systems that increasing latent diversity corresponds to an increase in the effective number of electoral parties. Some obvious exceptions that fall into the two categories of extremes mentioned in the prior section are the United States and Iceland. Although the former is highly diverse, it has few parties, fewer even than the other countries with the same electoral system (although different political regimes). Relative to the UK, at least, the minimum size principle may be kicking in. The latter, on the other hand, has less diversity than countries with a similar electoral system but more parties. Here, the more permissive nature of the Icelandic electoral system (magnitude plus other factors not reflected in the table) may be penalizing coordination failure so lightly that there is within-group competition.

Country	Mean N	Latent Diversity
M = 1		
UK	2.75	2.53
Canada	3.18	3.12
US	2.07	3.14
M = 3–5		
Iceland	3.93	1.96
Ireland	3.19	2.40
Japan	3.80	2.47
M = 10–13		
Sweden	3.64	2.02
Finland	5.57	2.48
M = 120–50		
Netherlands	5.04	2.64
Israel	5.27	2.81

Table 5.1: Mean effective number of electoral parties in legislative elections and latent preference diversity for selected countries, sorted by decreasing electoral system restrictiveness. Data from data set described below.

Overall, there seems to be a relationship between latent diversity, electoral systems, and the electoral party system in legislative elections. A more systematic empirical analysis is called for, however, a task to which the next two subsections turn. Regression analysis and new data sets are used to estimate extensions of Amorim Neto and Cox's (1997) and Cox's (1997) empirical models for legislative and executive party systems, modified to reflect the theory developed above. Note that the potential endogeneity problem with latent cleavages stemming from its contamination by political cleavages is perhaps ameliorated by the time invariance of the measure and by the inclusion of latent non-sociological cleavages in the additive index.

5.2.1 Quantitative Analysis of the Legislative Party System Using a New TSCS Data Set

First, a new time-series cross-section data set is used to test hypotheses about the relationship of latent preference diversity to the number of parties or candidates competing in legislative elections. In this sub-section and the following, testable hypotheses are developed; the data sets are described; model specification issues are discussed; and the analyses are conducted.

Testable Hypotheses

The dependent variable is elective, legislative party system fractionalization. That is, the summary measure F is applied to the vote shares of parties competing in a legislative country–election to yield the vote-share weighted number of parties. The institutional (electoral system and regime type) covariates are those used in Amorim Neto and Cox

(1997): the percentage of seats distributed in upper tiers; the average lower tier district magnitude; the presidential candidate party system; and the proximity of the presidential and legislative elections.[4] All of these variables are operationalized as described in Cox (1997) with the following exceptions.

The first concerns one of the two measures of electoral system restrictiveness. Amorim Neto and Cox (1997) and Cox (1997) both used the *median* lower tier district magnitude. Information about the median district magnitude was hard to come by for many country–elections in the data set. As a result, despite theoretical agreement with Amorim Neto and Cox that the median is a preferable measure to the mean, the mean is used here. The second concerns the measure of proximity of the presidential and legislative elections. Amorim Neto and Cox's operationalization is suitable for a cross-section from the not-too-distant past: it works reasonably well for countries with a seperately elected executive as long as executive elections have been held on either side of the legislative election. However, even here there are some flaws with the measure, such as how it handles intervening changes in regimes (e.g., periods of authoritarian rule). Further, once either very recent or very old elections are included in the analysis, new procedures must be developed because either the first or last legislative election may not have executive elections on both sides of it. Accordingly, the Amorim Neto and Cox operationalization is modified as detailed in the Appendix. Third, skew-reducing transformations are applied to some of the original operationalizations. The percentage of seats in an upper tier is raised to the 1/2 power and executive party system fractionalization is used instead of the effective number of executive candidates.

Departing from existing work, the latent cleavages variable is the measure of latent preference diversity introduced in Chapter 4: the additive index that combines indicators of the salience of the seven important latent cleavages. While the thesis has argued that this measure is an improvement over existing measures, there are still flaws when using it for legislative elections in polities without a nation-wide electoral district. As the prior section discussed, for such countries, we want both a measure of the average district-level latent preference diversity and a measure of the standard deviation of diversity across districts. Our measure from Chapter 4 effectively estimates the average district-level diversity using aggregate (national) figures and assumes that the standard deviation is zero. To the extent that districts depart from the national profile, the measure is a less accurate reflection of the true diversity in a polity.

Testable hypotheses couched in terms of these variable are as follows:

- Hypothesis 1: The relationship of latent preference diversity to electoral, legislative party system fractionalization is both statistically and substantively significant after controlling for political institutional and executive party system characteristics. That is, the null hypothesis that the coefficients on the three relevant terms (latent preference diversity, squared latent preference diversity, and latent preference diversity

[4]The thesis is sympathetic to arguments made by other scholars about modifications that should be made to Amorim Neto and Cox's (1997) and Cox's (1997) model, e.g. Chhibber and Kollman (2004) regarding federalism and Golder and Clark (2003) regarding the upper tier of the electoral system. The thesis is also aware of other flaws hitherto unremarked upon in the context of cross-national empirical tests like this one such as the failure to model learning processes and party system consolidation (discussed below). Nevertheless, it confines itself to the Amorim Neto and Cox model. Too many modifications at once might lead to confusion about which modifications are responsible for any changes to existing conclusions. Further, at the end of the day, this model remains the benchmark by which other work is judged.

interacted with mean district magnitude) are jointly zero should be rejected. However, the relationship is expected to be weaker than usual, so the null is unlikely to be rejected at conventional levels of significance.

- Hypothesis 2: The relationship of latent preference diversity to electoral, legislative party system fractionalization is nonlinear, *ceteris paribus*. Specifically, it takes the form of a concave parabola. In other words, the null hypothesis that the coefficient on the squared latent preference diversity variable is zero or greater than zero should be rejected for the alternative that it is less than zero.

- Hypothesis 3: The relationship of latent preference diversity to electoral, legislative party system fractionalization is conditional upon mean district magnitude, *ceteris paribus*. Specifically, the effect of latent preference diversity is increasing in district magnitude. That is, the null hypothesis that the coefficient on the interaction term between latent preference diversity and mean district magnitude is zero or less than zero should be rejected for the alternative that it is greater than zero.

- Hypothesis 4: The marginal effect of latent preference diversity will be both statistically and substantively less significant at low mean district magnitudes than at high ones for a given initial level of latent preference diversity; further, the marginal effect at low initial levels of latent preference diversity will generally be positive while at high initial levels of latent preference diversity it will be negative.

Data

An original time-series cross-section data set is used in the analysis. The unit of analysis is a country–election. All legislative elections held from 1945–2002 in countries during years when a country was considered democratic by Alvarez et al.'s (1996) coding rules[5] were included in the appropriate data set, subject to the following two restrictions.[6] First, only elections in countries with populations of 200,000 or more were included. Second, elections in African countries were excluded for practical reasons.

All in all, seven hundred and forty-two legislative elections held in seventy-one countries satisfied the above criteria for inclusion. The usual advanced industrial suspects are joined by new democracies in Asia such as Thailand and old but unstable democracies in South America such as Argentina. However, two final modifications to the set of cases needs to be made. First, following Cox (1997), fused elections—elections where voters cast one ballot for both the legislature and separately elected executive, although different electoral rules are then used to translate the votes into seats—are eliminated for the simple reason that it is hard to know in these cases to which strategic incentives voters might be responding. Four countries have held such elections: Bolivia, the Dominican Republic, Honduras, and

[5]These coding rules were used to produce the Alvarez et al. (1999) data set, which has been the basis for many subsequent studies. Specifically, elections held in countries in years where the variable 'REG' (regime type) from this data set was coded 0 (democracy) were included. Regime classifications for countries already in the data set were extrapolated into the 1990s. Elections in new countries created in the 1990s such as Estonia were included when the countries clearly satisfied the Alvarez et al. (1996) criteria for democracy. Some countries that may satisfy Alvarez et al.'s (1996) criteria for democracy for the first time in the 1990s were not actually assessed against this criteria (and thus were not included in the data set), such as Guyana. Future work that revisits this issue may end up including elections from these countries.

[6]A few exceptions are listed in the Appendix.

Uruguay. (In fact, all democratic elections in Bolivia and Uruguay have been fused.) Once fused elections are eliminated from the data set, we are left with seven hundred and fifteen legislative elections in sixty-nine countries. Second, list-wise deletion was chosen as the admittedly poor method of handling missing data.[7] Once observations with missing data have been list-wise deleted, six hundred thirty-seven legislative elections in sixty-two countries remain.[8]

There is some ambiguity about whether electoral systems data of this sort should be viewed as having a time series cross-sectional or panel data structure. Beck and Katz (1995, 634) characterize the former as "having repeated observations on fixed units, such as states or nations. The number of units analyzed would typically range from about 10 to 100, with each unit observed over a relatively long time period (often 20 to 50 years)." Panel data, on the other hand, is "wide but short" (Greene 2003, 283), sometimes with thousands of units but only a few (often far less than ten) time periods. In other words, asymptotics are in the number of time periods (T) with time series cross-section data and in the units (N) with panel data.

In this data set, between two and twenty-nine elections are observed per country. The average number of elections held by a country is ten. N is much greater than T here relative to the typical time series cross-section situation described in Beck and Katz's work. However, asymptotics *are* ultimately in T even though N is not fixed (new democracies are born and old ones sometimes die). We do not desire our inferences to be confined to the sample precisely for this reason: we aspire to a general theory applicable to all countries, subject to some concerns about the context in which electoral systems operate described below. It is worth noting the extremely unbalanced nature of the 'panel', which is also referred to as the non-rectangularity of the data. The number of observations varies greatly from country to country due to variance in the periodicity of elections (from roughly two to five years) and to variance in the length of time in which a country has been democratic. When necessary, the time series index is taken to be the year in which an election was held; years in which a country did not hold an election are treated as missing.[9] While we conclude

[7]To use terms from survey research, the missing data problem here is primarily item, not unit, nonresponse. There are very few cases with completely missing data. King, Honaker, Joseph and Scheve (2001) document the risks entailed by the use of this missing data strategy to deal with item nonresponse: both substantial information loss, producing certain inefficiency, and potentially bias, depending on which assumption of missingness holds. They advocate a multiple imputation strategy on the grounds that it always performs as well as list-wise deletion and often performs better. However, while future work may want to take their advice and utilize multiple imputation, this is not done here for a simple reason: the cases with item non-response are primarily country–elections of dubious democratic legitimacy. They either barely satisfy the Alvarez et al. (1996) coding criteria or represent a brief moment when democracy flourished in an otherwise dictatorial environment. It is problematic to include such cases alongside long-standing and stable democracies for reasons to be discussed shortly. In other words, list-wise deletion is deemed suitable because it is not clear that the cases with missing data are really comparable to those that are fully observed. The old analogy is the attempt to compare apples and oranges.

[8]Note that the actual number of observations will vary with the operationalization of the latent preference variable. The numbers reported here are for the use of the additive index (constructed using either unstandardized or standardized data) and the regression factor scores, all as calculated in Chapter 4.

[9]Rectangularization in this manner is necessary for certain calculations such as panel-corrected standard errors and the estimated contemporaneous correlations of the errors. It was originally suggested by Franzese (1995). There were only four cases of a country holding more than one election in a single year: Iceland 1959 (6/28 and 10/25), Ireland 1982 (2/18 and 11/24), Denmark 1953 (4/21 and 9/22), and the UK 1974 (2/28 and 10/10). For each, the election that was held the closest to either its preceding or following year

that this data is best described as time series cross-sectional, it poses unique challenges to analysts for the reasons described in this paragraph.

The actual data, data sources, and detailed coding rules are found in the Appendix to the thesis.

Model Specification Issues

Quantitative analyses of the effects of electoral systems on political outcomes such as the party system have historically confined themselves to advanced industrial democracies (e.g., Rae 1967, Powell 1982, Lijphart 1990*a*). In the early 1990s, comparativists broadened their set of cases to include poor, agricultural, but reasonably stable democracies such as India and OECD polities in all but name such as Israel (e.g., Lijphart 1994). Amorim Neto and Cox (1997) opened up the Pandora's box of case selection even further by including in their analysis all countries that held an election in the 1980s and that Freedom House classified as 'free' with respect to political rights. These selection criteria led to a sample that encompassed second and third world countries that were either new or unstable democracies, e.g. Brazil, Colombia, and the Czech Republic. Following this study, scholars freed the Furies, so to speak. Quantitative, cross-sectional analyses of the effects of electoral systems in new Eastern European democracies (e.g., Filippov, Ordeshook and Shvetsova 1999) as well as in all countries satisfying minimal democratic criteria (e.g., Golder and Clark 2003) were conducted. Maximal pooling across space, in other words, has become an accepted practice in electoral studies.

But matters do not end with pooling across space. What can be tentatively described as time series cross-sectional data as discussed above has been employed by several studies in the electoral and party systems literature to investigate the relationship between the dependent variable of party system and independent variables such as the electoral system and social cleavages (e.g., Ordeshook and Shvetsova 1994; Filippov, Ordeshook, and Shvetsova 1999). Pooling time series of cross-sections has the advantage of dramatically increasing the degrees of freedom relative to traditional cross-sectional analyses. This explains the recent enthusiasm for the technique in comparative politics generally and the electoral and party systems literature specifically, which has traditionally only had a small number of cases with which to work. Even when third wave democracies such as the ex-communist polities of Eastern Europe are included in cross-sectional analyses, the number of observations is still too small (circa seventy) to gain comparativists much leverage over research questions. Ergo, electoral studies has followed the trend in comparative politics as a whole in increasingly resorting to pooling across time.

As Chapter 3 noted, Golder and Clark (2003) recently jumped on the pooling time series of cross-sections bandwagon by employing the largest time series cross-section data set developed thus far in the literature to replicate and extend the model introduced by Amorim Neto and Cox (1997). They, like many comparativists, assume full pooling and follow Beck and Katz's (1995, 1996) influential prescriptions for dealing with time series cross-section data:

1. estimate by OLS;

2. test for serial correlation;

(as appropriate) was assigned to that year to avoid losing the data.

3. eliminate serial correlation if it is present either by including a lag of the dependent variable as a covariate or by FLGS (a Prais- Winsten or Cochrane-Orcutt estimator); and

4. calculate panel corrected standard errors.

While I have not conducted a scientific survey of quantitative comparative research that utilizes time series cross-sectional data, the few examples that quickly come to mind all limit themselves to this strategy. One cannot help but wonder if these steps suffice to ensure the validity of the analysis.

Several model specification issues were raised in Chapter 3. Time series cross-section data, which pools over both space and time, generally rests on the full pooling assumption that all cross-sectional units and time periods obey the same equation. In other words, it is assumed that coefficients are everywhere identical.[10] If these assumptions are not justified, OLS coefficient estimates may be biased and inconsistent. A related issue is a special property of time-series cross-section data: potentially non-spherical errors, i.e. errors that are likely to be serially correlated; contemporaneously correlated; and panel heteroskedastistic. OLS parameter estimates are still unbiased and consistent when the assumption of spherical errors is violated. However, depending on which components of the assumption do not hold, OLS might be inefficient and its estimated variance-covariance matrix of the estimated coefficients biased. We can and should test for violations of each of the assumed components of sphericality.

What is often overlooked is the fact that violations of assumed error sphericality may result from model misspecification. Heteroskedasticity is frequently the result of the true relationship between the dependent variable and covariates being nonlinear, usually accompanied by significant non-normality in the dependent variable (Neter, Kutner, Nachtsheim and Wasserman 1996, 407–08). Panel heteroskedasticity may result from the omission of unit-specific intercepts (Stimson 1985).[11] Similarly, serial correlation may also result from the assumption of a common level of the dependent variable, i.e. the use of a common intercept (Stimson 1985). Hence, simply applying the Beck and Katz (1995, 1996) correction to the estimated variance-covariance matrix after dealing with temporal dependencies in the data may be plastering over a more fundamental model specification problem. Just as Beck and Katz (1996) argue that it is better to make dynamics part of the model instead of treating it as a nuisance, so too may problems resulting from the full pooling of cross-sections be better addressed by model re-specification: relaxing the full pooling assumption to resolve what they call "cross-sectional complications" (5). The Beck and Katz prescriptions may also be unnecessary: nothing *guarantees* that OLS assumptions will be violated in the context of a particular time series cross section data set.

Fundamental model specification issues such as these are not adequately addressed by quantitative researchers working in the electoral systems literature. The pooling assumption

[10]This statement may or may not encompass the assumption that there is no unmodeled heterogeneity (i.e., that the intercepts are identical across cross-sections and time periods). If we view the intercept as one coefficient amongst many to be estimated, as many statisticians do, it does; however, some—primarily econometricians—use the term 'coefficients' to mean 'coefficients minus the intercept' (Kennedy 2003). Hence, from this perspective, we end up with two assumptions: the same equation (i.e., the same coefficients) and no unmodeled heterogeneity (i.e., the same intercept).

[11]Panel heteroskedasticity can also result from simple size differences in units, as Stimson (1985) also notes.

that is made—the cases to which the model applies and the way in which it applies—generally goes unchallenged.[12] This is ultimately not surprising: as was noted in Chapter 3, Bartels (1996) has described this as the least understood aspect of model specification. Unfortunately, the full pooling assumption seems particularly critical for the hypotheses at hand.

The Duvergerian argument generalized by Cox (1997) is, at heart, an equilibrium argument. One key assumption upon which the predicted equilibrium relationship between district magnitude and the number of viable party or candidate labels depends is common knowledge about which candidates are leading and which are trailing. Similarly, there must also be agreement about the optimal strategy for winning under a given electoral system. In other words, voters and elites must possess enough information to form expectations about candidate (or party) performance and winning strategies in order to engage in strategic behavior.[13]

A natural question that arises is when and where such common knowledge exists and hence the predicted equilibrium behavior will emerge. The answer is most likely that it must develop over time as a learning process. In this light, Reed and Thies (2001, 380–81) bemoan the "inadequacy of equilibrium-based analyses for the study of dynamic processes." Reed's (1990) seminal work on district-level competition in Japan demonstrated the extent to which both party elites and voters (with emphasis upon the former) are boundedly rational: they must learn how to behave in a strategically optimal manner. This may take time: in Japan, Reed found that it took between eight and thirteen elections (almost thirty years) for most districts to attain equilibrium.[14] In some situations, it might very well be the case that common knowledge is never attained and the predicted equilibrium behavior does not develop.[15] Moser (1999) has used the term 'party system institutionalization' to describe the common knowledge (expectations and information) necessary for electoral systems to have their predicted effects. He argues that low institutionalization in new

[12]For example, Golder and Clark's (2003) only test of the pooling assumption comes in the form of three cross-sectional regressions: a complete cross-section of the 1980s; a complete cross-section of the 1990s; and a cross-section of the 1990s excluding third wave democracies. The latter analysis was conducted because one sign on an estimated coefficient for the 1990s cross-section including third wave democracies was anomalous. Specifically, the estimated coefficient on the interaction term between logged mean district magnitude and latent social diversity was negative, contrary to expectations, the 1980s cross-section, and the time series cross-section analysis. As they themselves argue, their theory does not seem to apply to a set of their cases: namely, to third wave democracies. Similarly, Amorim Neto and Cox (1997, 166) devote one sentence to the matter. They state that removing the twenty commonly-studied European democracies from their sample, leaving thirty-four mostly non-European developing countries, yields "qualitatively similar results in all analyses". While more could certainly done, these researchers' mere acknowledgment of the pooling issue sets them apart from many others.

[13]Of course, there are many other assumptions that must be made to generate Duvergerian equilibria, among them short-term instrumentally rational behavior, as discussed by Cox (1997).

[14]Conversely, little time may be required. Reed (2001) provides evidence that more than 80% of electoral districts in Italy moved towards two party competition in only two elections following the introduction of a mixed member majoritarian system in 1993. An interesting and as-yet unexplored question in the electoral and party systems literature concerns how and why rates of learning differ under various electoral systems, regime types, and social conditions. Reed and Thies (2001, 380–81) argue that "as important as where the system is headed is when and how it will get there". Unfortunately, we have not moved beyond equilibrium analysis in our studies of democratic electoral competition.

[15]Canada may be one such case. Gaines's (1999) district-level analysis reveals that "district by district, year after year, Canadian elections are not normally two-party (or two-candidate) events" (Gaines 1999, 847).

democracies explains the failure of electoral systems to function as expected based on the experience of consolidated Western democracies, particularly in the "very different social and political context of postcommunist states" (Moser 1999, 1). In other words, convincing arguments have been made that electoral systems and other political institutional variables may not have the same effects on the party system in new or unstable and consolidated democracies. The same is true for a new electoral system in a consolidated democracy.

Blithely pooling cross-sections of consolidated and unconsolidated democracies as well as time periods (elections) of consolidated democracies that have changed electoral systems pays little heed to hypotheses that one model might not in fact fit all polities and time periods. Certainly, readers have every right to be skeptical of results from quantitative analyses that do not test the appropriateness of the full pooling assumption. This section of the thesis does not shy away from model specification issues. Rather, it explicitly tests the appropriateness of assumptions using a variety of methods. Exploring the sensitivity of results to model specification will hopefully imbue other researchers with greater confidence in the conclusions ultimately drawn about the hypotheses. It will also hopefully underscore the point that the Beck and Katz procedures do not suffice: model specification *is* the most fundamental issue. The section also argues that random effects may be a relevant model for this research question, contra to established wisdom.

The Analysis

The testable hypotheses regarding the legislative party system described above yields a standard linear-in-variables model represented by the following equation:

$$\begin{aligned} \text{EPSF}_{i,t} &= \beta_0 + \beta_1 \text{UP}_{i,t}^{1/2} + \beta_2 \text{LML}_{i,t} + \beta_3 \text{LATCL}_i + \beta_4 \text{LATCL}_i^2 \\ &\quad + \beta_5 \text{LML}_{i,t} \times \text{LATCL}_i + \beta_6 \text{PROX}_{i,t} + \beta_7 \text{EXECF}_{i,t} \\ &\quad + \beta_8 \text{PROX}_{i,t} \times \text{EXECF}_{i,t} + \epsilon_{i,t} \ . \end{aligned} \tag{5.1}$$

Here, EPSF is the fractionalization of the legislative electoral party system; LML is the logged mean district magnitude; LATCL is latent preference diversity; UP is the proportion of seats allocated in an upper tier; PROX is the time to the closest presidential election; and EXECF is the fractionalization of the separately elected executive party (actually, candidate) system. Keep in mind that EPSF and EXECF have been transformed from effective numbers in the Amorim Neto and Cox (1997) original to fractionalizations in order to reduce distributional skews and eliminate outliers as noted earlier; in the latter case, the transformation was only done for elections held under regimes with separately elected executives.[16] The same rationale underlies taking the square root of UP. Note that i indexes cross-sections (i.e., countries) and t time periods (i.e., elections). The time invariance of latent preference diversity is signaled by it not being subscripted by time.

Initial Checks on the Full Pooling Assumption

A first step is to test the full pooling assumption using a formal pre-test estimation strategy of the sort outlined in Bartels (1996) and Beck and Katz (2001). In the TSCS case, we might test the null hypothesis of parameter equality (i.e., the completely pooled model of equation 5.1) against the alternative of separate parameters for each cross-section (i.e.,

[16] That is, parliamentary regimes retain a value of 0 here.

unit-by-unit least squares). Unfortunately, due to the extremely unbalanced nature of the panel as well as to the time invariance of some covariates within some cross-sections, the standard F-test for the full pooling assumption in the TSCS setting cannot be conducted: many covariates (sometimes all) must be dropped from many cross-sections. This does not seem like a productive way to proceed.

Accordingly, we are left with testing full pooling assumption cross-sectionally. This approach dovetails well with the theoretical concerns raised in a previous section: that electoral systems (and potentially other variables) will have different effects in new or old but unstable democracies than they do in consolidated ones. The third wave of democratization saw the fall of authoritarian and the establishment of democratic regimes throughout Latin America in the mid 1980s. With the collapse of communism in the late 1980s and early 1990s, a host of new democratic regimes in Central and Eastern Europe further swelled the ranks of democratic societies in the mid to late 1990s. Hence, one of the best theoretically and practically motivated tests of the full pooling assumption pits the null hypothesis of parameter equality (i.e., full pooling across consolidated and unconsolidated democracies) against the alternative hypothesis of separate parameters for cross-sections of consolidated and unconsolidated democracies from the 1980s and 1990s. The other tests the null against the alternative of separate parameters for cross-sections of consolidated democracies with old electoral systems and unconsolidated democracies plus consolidated democracies with new electoral systems. This variant on the prior test goes a step further in addressing concerns about the context in which electoral systems operate: even in consolidated democracies, both voters and elites must learn about the properties of a new electoral system before it will have the predicted impact on political competition. In effect, we must parcel countries into those where we expect equilibrium behavior and those where we do not.

To conduct the first test, two cross-sections of polity–elections were compiled from the TSCS data set described in the prior section: one for the 1980s and one for the 1990s. In each case, the polity–election chosen was the one closest to the middle of the decade with the earlier election being selected in the case of a tie.[17] This selection procedure yielded a cross-section of forty-seven elections for the 1980s and sixty-one elections for the 1990s. The subset of consolidated democracies was defined as polities that were members of the OECD prior to 1990, plus Israel and minus Turkey. Using this definition, of the forty-seven elections held in the 1980s, twenty-four were in consolidated democracies and twenty-three in new or unstable democracies. Of the sixty-one elections held in the 1990s, twenty-four were again in consolidated and thirty-seven in unconsolidated democracies. Bartels's pre-test estimator is calculated using OLS estimation of equation 5.1 in `R` for each cross-section, where the time index is dropped and i indexes observations (countries). For both the 1980s and 1990s cross-sections, the null hypothesis of complete pooling is not rejected.[18] While the improvement in fit from estimating separate models for consolidated and unconsolidated democracies in the 1980s is not enough to reject the null hypothesis, it is suggestive of there being some differences between the sub-sections. For the 1990s, there is little such evidence. Coefficient estimates and estimated standard errors for the model fitted to the pooled and

[17] That is, if a polity held elections in 1983 and 1987, the 1983 election was taken. Preference was also given to elections without missing data.

[18] The test statistics for the 1980s and 1990s cross-sections are 0.996 and 0.389, respectively. They follow the F distribution with 9 and 38 and 9 and 43 degrees of freedom, respectively. This yields p-values of 0.465 and 0.934, again respectively.

partitioned data are shown in Table 5.2. The 1990s cross-sections are denoted '(1)'.

To conduct the second test, a similar cross-section of elections from the 1990s was constructed. The difference lies in the election selected for several consolidated democracies such as Italy, which adopted new electoral systems in the mid-1990s. In light of the contextual concerns raised above, for these polities, the election selected was the one closest to the middle of the decade that was conducted under the old electoral system. The null hypothesis of complete pooling is thus tested against the alternative of separate models for elections held in consolidated democracies with old electoral systems and elections held in unconsolidated democracies or consolidated democracies with new electoral systems. Despite the different alternative hypothesis, the conclusion drawn is the same: we again fail to reject the null hypothesis.[19] Coefficient estimates and estimated standard errors are again shown in Table 5.2, although the 1990s cross-sections are denoted '(2)' this time around. Note that the cross-section of unconsolidated democratic elections used for the second test is the same as that used for the first; hence, columns 7 and 10 in Table 5.2 are the same to the limits of numerical accuracy.

It is worth pointing out that the model explored in this section does a better job of fitting the data from consolidated than unconsolidated democracies. This suggests that even though the gains from pooling outweigh the losses, we should be concerned about the applicability of equilibrium theories such as those discussed here to places and time periods that are not in equilibrium. Similarly, the signs, statistical significance, and substantive significance of important variables such as latent preference diversity vary from cross-section to cross-section. This observation reinforces arguments about both the importance of context and model specification.

Bartels does highlight three important deficiencies of this pre-test estimation strategy: the essentially arbitrary choice of a significance level; the unknown statistical properties of the pre-test estimator (i.e., inferences based on either the pooled or unpooled results will fail to reflect the uncertainty embodied in the model selection phase); and for the specific F-test employed here, the assumption of homogeneity. Regarding the latter, the assumption seems tenable for the 1990s cross-section but less tenable for the 1980s, which should strengthen our confidence in the decision to pool consolidated and unconsolidated democracies. Regarding the first issue, there is some ambiguity as to whether or not the test will tend to reject pooling too readily. Bartels points out that the "F-test with a significance level much looser than [the conventional] 0.05 may fail to reject the null hypothesis even when the parameters estimates we care about differ substantially, while an F-test with a significance level of 0.001 may reject the null hypothesis even when the parameter estimates we care about are similar" (Bartels 1996, 914). In the TSCS context, Beck and Katz's (2001) Monte Carlo experiments led them to preliminarily conclude that pooled OLS is often preferable to unit-by unit OLS, even when statistical tests reject the null of pooling.

The pre-test estimation strategy adopted here is still, somewhat dubiously, an 'either-or' one: either we completely pool, or we do not. In-between positions exist in the form of Bartels's (1996) fractional pooling, random or fixed effects models, and random coefficients models, to name the most straightforward of the alternative approaches. For the time being, the thesis neither pursues fractional pooling nor random coefficients. Instead, it focuses on the assumption of a common intercept. This model specification issue, as will be shown below, lies at the heart of violations of the OLS assumptions of panel homoskedasticity

[19]The test statistic is 0.505, which has a p-value of 0.863.

	1980s Pooled	1980s Consolidated	1980s Unconsolidated	1990s Pooled (1)	1990s Consolidated (1)	1990s Unconsolidated (1)	1990s Pooled (2)	1990s Consolidated (2)	1990s Unconsolidated (2)
Intercept	0.146	1.10	−0.0729	0.0615	0.693	−0.0181	−0.0235	0.568	−0.0305
	(0.475)	(0.434)	(1.09)	(0.370)	(0.481)	(0.645)	(0.366)	(0.447)	(0.646)
LML	0.0962	−0.0516	0.115	0.00532	−0.214	−0.0112	0.0236	−0.175	−0.0114
	(0.107)	(0.129)	(0.225)	(0.0791)	(0.146)	(0.140)	(0.0798)	(0.144)	(0.141)
LATCL	0.267	−0.235	0.349	0.442	0.184	0.489	0.492	0.247	0.497
	(0.312)	(0.256)	(0.737)	(0.242)	(0.289)	(0.424)	(0.238)	(0.271)	(0.425)
LATCL^2	−0.0346	0.0284	−0.0416	−0.0768	−0.00638	−0.0838	−0.0838	−0.0701	−0.0851
	(0.0524)	(0.0399)	(0.125)	(0.0398)	(0.0438)	(0.0697)	(0.0392)	(0.0448)	(0.0699)
LML × LATCL	−0.0215	0.0281	−0.0368	0.00983	0.0924	0.0133	0.00401	0.0803	0.0133
	(0.0382)	0.0477	(0.0709)	(0.0273)	(0.0547)	(0.0462)	(0.0276)	(0.0539)	(0.0463)
$\text{UP}^{1/2}$	0.109	−0.0275	0.347	0.122	0.0147	0.154	0.112	−0.0360	0.154
	(0.101)	(0.0710)	(0.251)	(0.0489)	(0.0741)	(0.0742)	(0.0508)	(0.0743)	(0.0743)
PROX	−0.180	−0.528	0.0537	−0.525	−0.498	−0.542	−0.525	−0.429	−0.541
	(0.132)	(0.182)	(0.235)	(0.178)	(0.291)	(0.265)	(0.177)	(0.258)	(0.266)
EXECF	0.0298	−0.0266	0.0555	0.0467	0.0412	0.0478	0.0465	0.113	0.0479
	(0.0193)	(0.0227)	(0.0341)	(0.0639)	(0.153)	(0.0875)	(0.0630)	(0.143)	(0.0876)
EXECF × PROX	0.0226	0.220	−0.0771	0.779	0.675	0.804	0.774	0.447	0.804
	(0.0621)	(0.0856)	(0.105)	(0.304)	(0.579)	(0.445)	(0.303)	(0.528)	(0.446)
n	41	24	23	61	24	37	61	24	37
R^2	0.286	0.618	0.334	0.317	0.433	0.347	0.327	0.539	0.347

Table 5.2: Estimated coefficients and standard errors for the cross-sectional models of legislative elections estimated as part of a pre-test check on the full pooling assumption.

and no autocorrelation. A more theoretically elegant solution in part involves teasing the concerns about context into a formal hypothesis involving the variable(s) of 'new electoral system' and 'unconsolidated democracy', operationalizing the variable(s), and explicitly testing the hypothesis. As sympathetic as the thesis is to this approach, it is a task that must be left to future research.

Specification Tests

We initially estimate the model given by equation 5.1 using OLS in `R` and proceed to test for violations of assumed error sphericality. This stands in contrast to the standard approach in comparative politics of blindly following Beck and Katz's prescriptions for dealing with TSCS data. The simple fact of the matter is that there is no need to correct for problems that do not exist. Before attempting remedial solutions, we should first determine if OLS assumptions are violated. This is particularly important in our case, where theory suggests that the same equation might not always apply even though we failed to reject the null hypothesis of full pooling. All specification tests described below were performed in `R` using original code.

First, the assumption of no serial correlation. Two tests are obvious choices, both of which reveal the presence of serial correlation. One is the simple regression of the OLS residuals on their lag (Greene 2003, 268–69), which yields the estimate $\hat{\rho} = \hat{\text{Corr}}[\epsilon_t, \epsilon_{t-1}] = 0.718$. An approximate test of the null hypothesis that $\rho = 0$ is a t-test based on this regression, which strongly rejects the null for the alternative of autocorrelation (the p-value is 0). The second is a Lagrange Multiplier test (Greene 2003, 269), which involves regressing the OLS residuals on the original covariates plus the lagged residuals.[20] The value of the test statistic for testing the null hypothesis of no autocorrelation versus the alternative of either an AR(1) or MA(1) process is 294, which strongly rejects the null (the p-value is 0).[21] The estimate of ρ from this test is 0.748. Both tests, then, suggest that the level of residual correlation in the data is not trivial. Less formally, panel-wise correlograms suggest that many cross-sections are not characterized by autocorrelation, which is not surprising given the many short time series.[22] It is for this reason that autocorrelation is not much of a concern in traditional panel analyses. Of those that do, most have what looks like an AR(1) disturbance process, although a few seem to be characterized by a MA(1) process. The autocorrelation fails to display a rapid decay towards zero in several countries, which not coincidentally have some of the longest time series.

Second, the assumption of homoskedasticity. Three likely tests are the Wald, the Lagrange Multiplier, and White's general test, all of which use the OLS residuals.[23] Both

[20]Note that the test generalizes to a joint test of the first P autocorrelations. Setting P = 1 here seemed appropriate due to the many short time series for this non- rectangular and almost panel-like data set.

[21]The test was performed using both procedures for handling the first time period in each panel (or cross-section) without affecting the conclusions drawn. Nevertheless, in the interests of replicability as suggested by Greene (2003, 269), readers may like to know that the above results were calculated by dropping the first observations instead of filling in the lagged residuals with zeros.

[22]For example, only roughly 23% (14) of countries have an estimated autocorrelation of greater than 0.5 at lag 1.

[23]Note that for the Wald and Lagrange Multiplier tests, no degrees of freedom correction is used in estimating σ^2 from the OLS residuals, following Greene. Note also that seemingly natural modifications to the Wald and Lagrange Multiplier tests have been made to accommodate the non-rectangularity of the data: for a specific cross-sectional unit i, the number of observations T_i is used instead what both formulas assume (with balanced panels in mind) is a constant T.

the Wald (Greene 2003, 323–24) and White's general test (Greene 2003, 222–23, 324) require no distributional assumptions. White's general test evaluates the null hypothesis of homoskedasticity, i.e. $\sigma_i^2 = \sigma^2$ for all i, against the alternative of heteroskedasticity, i.e. $\sigma_i^2 \neq \sigma^2$ for all i. This is fittingly (in light of the name) the most general of the tests. The value of the test statistic is 110, which has a p-value of 0, so the null is strongly rejected. The Wald test conversely tests the null of a common variance against the alternative of the groupwise heteroskedastic model (panel heteroskedasticity), i.e. $\sigma_i^2 \neq \sigma^2$ for all i, where i no longer represents observations but groups (in this case, the countries).[24] The value of the test statistic is quite large, as is often the case: 152102. With a p-value of 0, the null hypothesis is again strongly rejected. Finally, the Lagrange Multiplier test (Greene 2003, 328) tests the same null and alternative hypotheses as the Wald test but assumes normality. The test statistic has value 286 and the p-value is 0, so again the null hypothesis is rejected.

Third, the assumption of no contemporaneous correlation. Unlike the prior two assumptions, this one is difficult to test for such a severely unbalanced panel. Many correlations, in fact, cannot be calculated because many pairs of countries have not held elections in the same year at least twice. For example, Austria and Venezuela only held elections in the same year once: in 1983. Of the correlations that can be estimated, some are the product of only two observations and are accordingly artificially high. Estonia and Turkey are an example here, having twice held elections in the same years (1995 and 1999). At any rate, there is little reason to believe that contemporaneous (spatial) correlation should be as problematic for electoral data like this as it is often viewed as being for TSCS data. Beck and Katz (1995), who publicized this potential problem, mostly dealt with political economy TSCS data, where links between economies indeed make contemporaneous correlations likely. With elections, it is harder to see this as a problem. There may be electoral equivalents of global economic shocks (such as World War II), but they will surely be fewer and farther between. Hence, while we cannot test the reasonableness of this final assumption, theory suggests that it is appropriate.

Specification tests having revealed violations of two of the three components of assumed error sphericality, homoskedasticity and no serial correlation, we are confronted with a choice: to transform the data and correct the asymptotic variance-covariance matrix of the estimated coefficients or to investigate model specification. The heteroskedasticity and autocorrelation—particularly the non-stationarity—that we have observed are often the consequences of model misspecification. Accordingly, we pursue the second avenue by testing the appropriateness of the assumption of a common intercept. That is, the null hypothesis that there is no unmodeled heterogeneity is tested against the alternative that there is. The Lagrange Multiplier test of Breusch and Pagan (1980) modified for unbalanced panels by Baltagi and Li (1990) is the best choice for this data.[25] Specifically, it tests the

[24] There is some ambiguity in Greene (2003) if the Wald test statistic is computed using OLS or FGLS residuals. It is clear from the text that the estimate of σ^2 can be calculated from either set of residuals; however, the same is not true of the estimates of σ_i^2 and $\mathrm{Var}[\sigma_i^2]$. In developing the test, Greene does not specify which residuals are appropriate (see page 223–24), but in later examples, he uses the FGLS residuals (see page 331). The OLS residuals are used throughout, which may invalidate the reported results if the FGLS residuals are actually required.

[25] The test statistic is the following:

$$\lambda_{LM} = \frac{(n\bar{T})^2}{2}\left(\frac{A_1^2}{(\sum_i T_i^2) - n\bar{T}}\right),$$

null hypothesis that the variance of the intercept component of the composite error term in a random effects model is zero against the alternative that it is not. The value of the test statistic is 813, which has a p-value of 0, so the test strongly rejects the null hypothesis of the equality of intercepts. Accordingly, OLS estimates may be biased and inconsistent.

The next model specification issue to consider now that we have rejected the use of a common intercept is whether a random or a fixed effects model is appropriate. Of course, a time invariant covariate like we have in the form of the latent preferences variable rules out the use of fixed effects. However, if the unmodeled heterogeneity is correlated with included variables, the random effects model will yield biased and inconsistent coefficient estimates (as will OLS). If it is not, both the random effects estimator and OLS are unbiased but the former is the most efficient and hence should be the model of choice. The test for the unbiasedness of the random effects model is the Hausman (Greene 2003, 301–03).[26] The null hypothesis is that there is no correlation between the composite error term and the explanatory variables. The value of the test statistic is 0.353, which has a p-value of 0.997. Hence, the Hausman test fails to reject the null hypothesis and we conclude that the random effects model is both unbiased and consistent. It is consequently the best choice of the three alternatives. This result is fortuitous. If the test had led us to reject the null hypothesis, an advanced estimator such as Hausman and Taylor's (1981) or Plümper and Troeger's (2004) would have been called for to deal with the time invariant covariate in the face of correlation between the unobserved country effects and the included variables.

Having settled upon a random effects model, we now return to the initial assumptions of homoskedasticity and no serial correlation, which also apply to the random effects model in its most general formulation. Has model re-specification eliminated the problems identified earlier? The answer is yes, for the most part. The simple test for serial correlation discussed above—the regression of the residuals on their lag—reveals that while a t-test still leads us to reject the null hypothesis of no serial correlation, the estimate of ρ is now only 0.359. The magnitude of the problem has been greatly reduced. Similarly, groupwise heteroskedasticity is explicitly introduced into the estimation of the random effects model by the non-rectangularity of the data, i.e., by the variance in group sizes (Greene 2003, 295–96). At any rate, once group-specific effects are incorporated in the model, heteroskedasticity in the unique effects $\epsilon_{i,t}$ of the composite error term $\eta_{i,t} = u_i + \epsilon_{i,t}$ does not seem to be a problem, even though the random effects model could be extended to incorporate groupwise

where

$$A_1 = 1 - \frac{\sum_{i=1}^{n}(\sum_{t=1}^{T_i} e_{it})^2}{\sum_i \sum_t e_{it}^2}$$

and e_{it} is the residual for the ith country and tth time period from the OLS estimation of the pooled model given by equation 5.1. The statistic is distributed χ^2 with one degree of freedom.

[26] With time invariant covariates, Greene (2003, 306) suggests dropping them and then proceeding as usual with the test. The test statistic is $W = [\mathbf{b} - \hat{\beta}]\prime\hat{\mathbf{\Psi}}^{-1}[\mathbf{b} - \hat{\beta}]$, where $\mathbf{b}$ is the vector of coefficient estimates from the fixed effects model minus the constants, $\hat{\beta}$ is the vector of coefficient estimates from the random effects model minus the constant, and $\hat{\mathbf{\Psi}}$ is the matrix of differences in the estimated asymptotic variance-covariance matrices for these coefficient estimates from the two models, $\mathrm{Var}[\mathbf{b}] - \mathrm{Var}[\hat{\beta}]$. It is distributed χ^2 with $K - 1$ degrees of freedom, where K is the number of parameters *including* the constant. There is some ambiguity as to whether or not to include the interaction term between latent preference diversity and logged mean district magnitude: while this variable is not time invariant, the time invariant main effects have been dropped. The test was performed both ways. The two tests resulted in similar values of the test statistic and p-values and hence to the same conclusion.

or other heteroskedasticity in $\epsilon_{i,t}$.[27] Heteroskedasticity in the group-specific component u_i is less tractable and is not considered here.

Since there do not exist compelling theoretical arguments for including a lag of the dependent variable on the right-hand side, the remaining serial correlation can be treated as a nuisance (Beck and Katz 1996) and eliminated by estimating a random effects model with an autocorrelated error process.[28] This model uses an estimate of ρ and either the Prais-Winston or Cochrane-Orcutt estimator to transform the data before proceeding as usual. Inspection of correlograms suggests that the best possible description of the error process is AR(1), although this is in effect an average given the variance in the disturbance process from country to country. The estimate of ρ is obtained from a simple regression of the residuals from the fixed effect model on their lag as per Greene (2003, 318), $\hat{\rho} = 0.351$.[29] Accordingly, a random effects model with an AR(1) error process is fit in `R` using my estimate of ρ. A likelihood ratio test establishes the statistical significance of the AR(1) error autocorrelation in the random effects model.

Results

Coefficient estimates and standard errors from the OLS, fixed effects, random effects, and autocorrelated random effects models discussed above are shown in Table 5.3. Also included in the table are estimates from a cross-sectional version of equation 5.1 fit by OLS using replication data from Cox (1997), with the same measure of latent preference diversity developed in this thesis supplied in the place of Cox's ethnic heterogeneity. Note that R^2 for the fixed effects model is obtained by including $n - 1$ country dummy variables and an intercept. For the random effect models, what is reported as R^2 is the squared correlation between the fixed (population) effects fitted values and the actual response values, following convention. This is of course equivalent to the coefficient of determination from a regression of the actual on the fitted values.[30]

For the normal linear model estimated by OLS, White's (1980) heteroskedastic-consistent and Beck and Katz's (1995) panel-corrected standard errors are displayed in the table in addition to the standard OLS estimates. Note, however, that panel-corrected standard errors are not applicable outside of the time-series cross-section context: good estimates

[27] The groupwise heteroskedastistic random effects model (Greene 2003, 296–98, 316–17) is not considered, although future work could explore whether or not this model is an appropriate specification for the data. A visual check—inspection of scatterplots of the absolute value of the residuals against fitted values—does not reveal much heteroskedasticity.

[28] Golder and Clark (2003) include the lagged effective number of electoral parties in some models on the grounds that it might signal the viability of parties to voters. The argument is not wholly convincing. Based on the results reported here as well as on their use of the Durbin-Watson test, which is notoriously inconclusive, the thesis is also skeptical of their conclusion that autocorrelation is not a problem for their models without a lagged dependent variable on the right-hand side.

[29] This procedure, of course, necessitates dropping the time-invariant covariates, which may or may not cause problems. How the `lme` function in `R` estimates ρ for the autocorrelated random effects model is not known. Its estimate, produced as part of the call to `lme`, $\hat{\rho} = 0.582$, is substantially different. Also unknown is which procedure (Prais-Winston or Cochrane-Orcutt) the `lme` function uses. Future work should resolve these issues.

[30] The pseudo-R^2 for the random effects models looks similar to that for the fixed effects model if we use the random (country-specific) fitted values instead of the fixed (population) fitted values. R^2 increases to 0.756 for the random effects and 0.746 for the autoregressive random effects models in this case. However, such an approach does not make sense with random effects: we are interested in generalizing to the population, not in confining our predictions to the sample.

	OLS	FE	RE	RE-AR(1)	OLS-Cox
Intercept	0.504		0.295	0.375	0.576
(Std)	(0.104)		(0.299)	(0.301)	(0.324)
(PCSE)	(0.0958)				
(White)	(0.0989)				
LML	0.00664	−0.00152	0.0548	0.0254	0.0168
(Std)	(0.0217)	(0.00621)	(0.0330)	(0.0393)	(0.0700)
(PCSE)	(0.0206)				
(White)	(0.0232)				
LATCL	0.0984		0.224	0.188	0.0231
(Std)	(0.0701)		(0.206)	(0.207)	(0.212)
(PCSE)	(0.0650)				
(White)	(0.0638)				
LATCL^2	−0.0173		−0.0321	−0.0290	−0.00488
(Std)	(0.0120)		(0.0352)	(0.0353)	(0.0354)
(PCSE)	(0.0113)				
(White)	(0.0106)				
LML × LATCL	0.00995		−0.0162	−0.00568	0.00779
(Std)	(0.00775)		(0.0116)	(0.0135)	(0.0250)
(PCSE)	(0.00744)				
(White)	(0.00826)				
$\text{UP}^{1/2}$	0.118	0.128	0.142	0.0904	0.106
(Std)	(0.0172)	(0.122)	(0.0239)	(0.0262)	(0.0671)
(PCSE)	(0.0159)				
(White)	(0.0181)				
PROX	−0.418	−0.188	−0.205	−0.147	−0.648
(Std)	(0.0442)	(0.0367)	(0.0352)	(0.0299)	(0.151)
(PCSE)	(0.0468)				
(White)	(0.0622)				
EXECF	0.0893	0.0979	0.0919	0.112	0.00165
(Std)	(0.0221)	(0.0261)	(0.0236)	(0.0203)	(0.116)
(PCSE)	(0.0231)				
(White)	(0.0187)				
EXECF × PROX	0.555	0.249	0.271	0.183	1.05
(Std)	(0.0789)	(0.0632)	(0.0608)	(0.0503)	(0.283)
(PCSE)	(0.0781)				
(White)	(0.103)				
n	634	651	634	634	41
R^2	0.345	0.752	0.200	0.191	0.558

Table 5.3: Estimated coefficients and standard errors for the OLS, fixed effects, random effects, and autocorrelated random effects variants of the model represented by equation 5.1. OLS estimation using cross-sectional replication data from Cox (1997) also shown. Estimated random and fixed effects not shown.

of the contemporaneous correlations of the errors are only obtained with T $\gg$ N (Beck and Katz 1995, 638). As an earlier section of the chapter discussed, it is not at all clear that this data can be characterized as temporally dominated. Hence, panel-corrected standard errors are not appropriate. As the prior section illustrated, the data's real problems are heteroskedasticity and serial correlation, not contemporaneous correlation. The former, happily, can be accommodated by the simpler White correction. Nevertheless, the estimates from all three procedures are presented for comparative purposes.

Not shown in the table is the Amorim Neto and Cox (1997) model estimated using OLS and this data, i.e. the model represented by equation 5.1 minus the squared latent preference diversity term. All coefficient estimates are similar to those reported in the first column of Table 5.3 save for that on latent preference diversity, which is now small and negative (-0.000621 with a standard error of 0.0142, to be exact).

Four conclusions relevant to the testable hypotheses can be drawn from this table. The discussion that follows refers to the autoregressive random effects model unless otherwise noted, as this model was the one ultimately settled upon in the prior section.

First, there is not a statistically significant relationship between latent preference diversity and party system fractionalization. A Wald F-test for the joint significance of the latent preference diversity term and its square fails to reject the null hypothesis that the coefficients on both are zero. (The p-value of the test statistic is a whopping 0.625.) The same conclusion is reached for the simpler, nested autoregressive random effects model represented by equation 5.1 with the interaction term between latent preference diversity and the logged mean district magnitude dropped. Unfortunately, a Wald F-test for the joint significance of all three of these terms cannot be conducted due to the differences in their degrees of freedom.[31] Of course, at all conventional levels of significance, we fail to reject the null hypotheses that the coefficients on the terms of latent preferences, squared latent preferences, and the interaction between latent preferences and mean district magnitude are zero using two-sided tests, but these tests are not relevant in the context of a conditional, polynomial regression model.

The absence of a statistically significant relationship at conventional levels between latent preference diversity and the number of parties competing in legislative elections at conventional levels is not surprising. The theory proposed in this and hinted at in prior chapters explicitly predicted a weak relationship due to the great distance between latent preference diversity and party system fractionalization on the causal chain. Latent diversity *should* be a poor instrument for politicized diversity. Nevertheless, the statistical relationship is weaker than expected. Not only is statistical significance not achieved at conventional levels, it does not come close to being achieved. (The latter point speaks to the unfortunate tendency in political science to 'live and die at 0.05'.) The issue of substantive significance will be addressed below.

Leaving aside the issue of the statistical significance of the overall relationship, the effect of latent preference diversity on legislative party system fractionalization is mostly as predicted by the remaining three testable hypotheses.

First, a one-sided test for the significance of the squared latent diversity term fails to reject the null, but the p-value is a reasonably respectable 0.207. One can concoct par-

[31] Note, though, that an F-test for the joint significance of the three terms for the OLS model does reject the null hypothesis (the p-value is 0.0384). The same is true for the Amorim Neto and Cox model regarding the two latent diversity terms, although just barely (the p-value is 0.0424).

tial explanations for the lack of statistical significance of latent preference diversity and its square. As is common in polynomial (curvilinear) linear-in-variables regression, the latent preferences and squared latent preferences terms are highly correlated, which produces unstable coefficient estimates reflected in large standard errors. Further, since the latent preferences variable is time invariant, the random effects estimates of the coefficients on these two terms come from the between estimator, which has substantially fewer observations to work with (only the number of countries) than the within estimator and thus even fewer degrees of freedom (59 instead of 567). This again leads to less precise estimates and larger standard errors. In light of these issues, the hypothesis does not fare too badly on the statistical front. Since the coefficients on the two terms are of the expected signs, the data suggestively supports the hypothesized non-linear relationship. This conclusion is bolstered by the fact that the nonlinear OLS model outperforms the Amorim Neto and Cox OLS model in goodness of fit, even adjusting for the extra term.

Second, the data does not support the hypothesized conditional relationship between latent preference diversity and the logged median district magnitude. The interaction term between these two variables has by far the lowest t-ratio (and hence the highest p-value) of the lot: 0.675 for the two-sided test. The one-sided test clearly rejects the null since the estimated coefficient has the wrong sign. There is more support for a conditional relationship from other models (OLS and non-autoregressive random effects), but still not strong support. This means that change in latent preference diversity under restrictive electoral systems, operationalized primarily by logged mean district magnitude, should be viewed as having the same effect as change under permissive ones.

This conclusion poses problems for the theoretical hypothesis. If, as these results suggest, we drop the interaction term from equation 5.1 and fit an autoregressive random effects model, the coefficient estimate on logged mean district magnitude is 0.00915. With an estimated standard error is 0.00548, this parameter is significant at the 0.10 level. The conclusion is that there will be more electoral coordination in restrictive than permissive electoral systems, but the effect of latent preference diversity is identical across electoral systems once we control for restrictiveness in the form of mean district magnitude. The estimated coefficients and standard errors on latent preference diversity and its square are similar for the simpler model, yielding an estimated marginal effect of

$$\frac{\partial \hat{E}\left[\text{EPSF}|\text{X}\right]}{\partial \text{LATCL}} = 0.175 - 0.0564 \text{ LATCL} \; . \tag{5.2}$$

A plot of the conditional effect of latent preference diversity on legislative party system fractionalization still resembles a concave parabola.

Third, the marginal effects. Interpretation of coefficients is difficult with the relationship non-linear as well as conditional upon the logged mean district magnitude, but we can muddle through to a certain extent. The signs on the estimated coefficients for latent diversity and its square are positive and negative, respectively. This suggests that increases in latent preference diversity initially lead to increases in party system fractionalization but eventually to decreases, as hypothesized. However, the sign on the estimated coefficient for the interaction term between logged mean district magnitude and latent preference diversity is negative, contrary to what we hypothesized as mentioned above. This suggests that the effect of an increase in latent preference diversity is dampened by permissive electoral systems relative to restrictive (small mean district magnitude) ones.

Getting precise requires us to stop discussing individual terms. As is always the case with interaction and polynomial regression models, the marginal effect is the real quantity of interest. For latent preference diversity, this is

$$\frac{\partial E\left[\text{EPSF}|\text{X}\right]}{\partial \text{LATCL}} = \beta_3 + \beta_5 \text{LML} + 2\beta_4 \text{LATCL} \ , \tag{5.3}$$

where EPSF, LATCL, LML, and the coefficients are as specified in Equation 5.1.[32] In English, the effect of a one unit increase in latent preference diversity depends upon both the logged mean district magnitude and the initial level of diversity. The estimated marginal effect is consequently

$$\frac{\partial \hat{E}\left[\text{EPSF}|\text{X}\right]}{\partial \text{LATCL}} = 0.188 - 0.00568 \text{ LML} - 0.0580 \text{ LATCL} \ . \tag{5.4}$$

This is a hard quantity to visualize, so Figure 5.1 displays the estimated marginal effects over the range of mean district magnitude for three values of latent preference diversity: the minimum, the median, and the maximum of the data. Of course 95% confidence intervals for these marginal effects, while not shown, all contain zero. The lack of statistical significance is not a surprise given the large estimated standard errors on the relevant coefficients.

Again leaving the issue of statistical significance aside, it is clear from Figure 5.1 that the estimated marginal effects are indeed decreasing in mean district magnitude: for each of the three marginal effects curves corresponding to a different initial level of latent diversity, the curve slopes downwards as mean district magnitude increases. However, the differences are not substantial. Beyond reasonably small mean district magnitudes, the curves are fairly flat. More importantly from the perspective of the hypotheses advanced here, an increase in latent preference diversity from either an initially low level (represented by the top-most, black curve) or an initially moderate level (represented by the middle, green curve) has a positive impact on legislative party system fractionalization: more diversity translates into more parties. However, at high levels of latent preference diversity (represented by the bottom-most, magenta curve), an increase in diversity has the opposite effect: all else being equal, party system fragmentation is reduced through greater electoral coordination. The estimated conditional effect of latent preference diversity takes the form of a concave parabola. In other words, the data suggestively if not statistically supports the hypothesized nonlinear relationship between latent preference diversity and legislative party system fragmentation.

Finally, we depart somewhat from conclusions related to the testable hypotheses to return to the issue of model specification. It is obvious from an inspection of Table 5.3 that the substantive conclusions drawn about the effect of important covariates depend upon the model chosen. Consider the variable of interest to this thesis: latent preference diversity. First, Table 5.3 reveals different signs on the estimated coefficient for the interaction between

[32] In this expression and the one that follows, X represents the set of covariates. The variance of the marginal effect is complicated:

$$\begin{aligned} Var\left(\frac{\partial E\left[\text{EPSF}|X\right]}{\partial \text{LATCL}}\right) \quad = \quad & Var[\beta_3] + 4\text{LATCL}^2\, Var[\beta_4] + \text{LML}^2\, Var[\beta_5] + 4\text{LATCL}\, Cov[\beta_3, \beta_4] \\ & + 2\text{LML}\, Cov[\beta_3, \beta_5] + 4\text{LATCL} \times \text{LML}\, Cov[\beta_4, \beta_5] \ . \end{aligned}$$

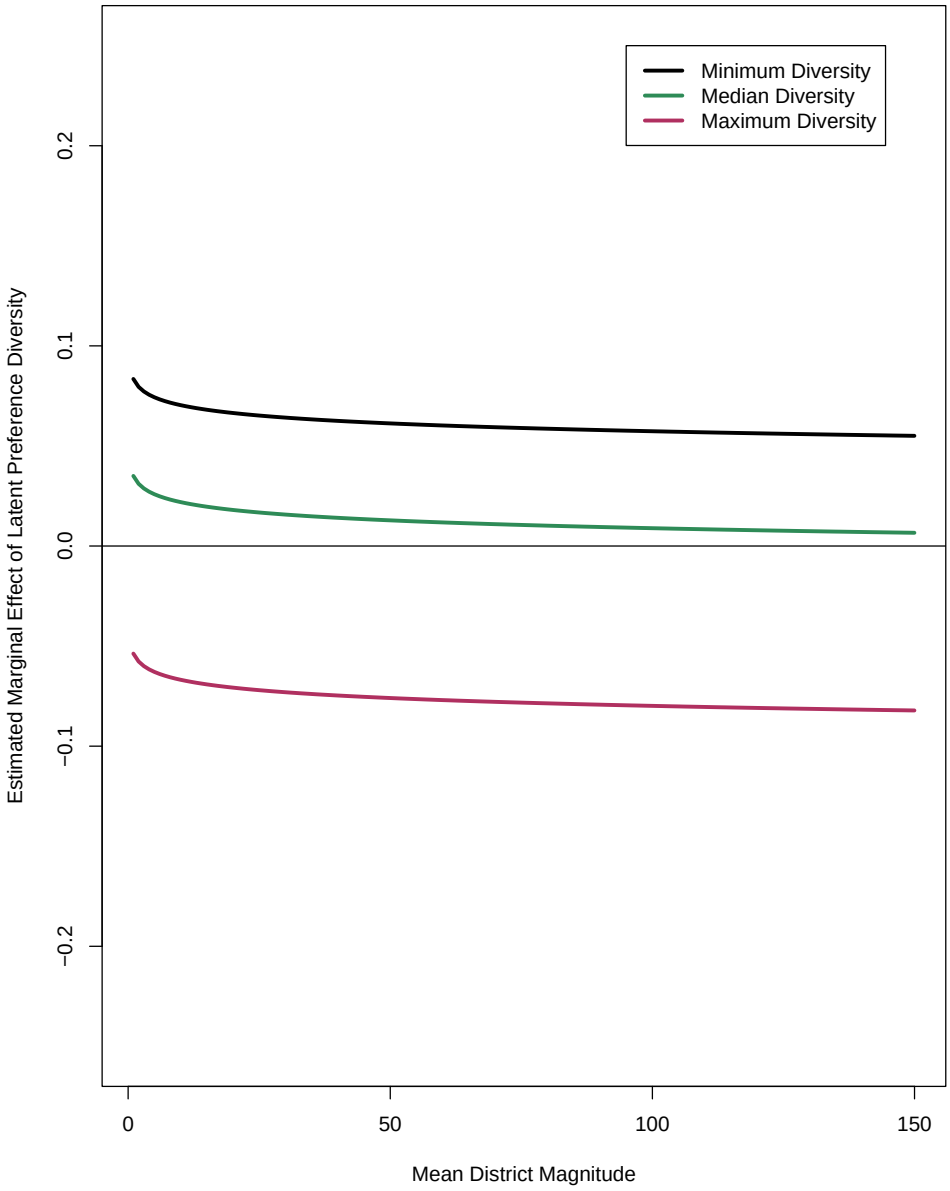

Figure 5.1: Estimated marginal effects of latent preference diversity over the range of mean district magnitude for the minimum, median, and maximum values of latent preference diversity, legislative elections.

latent preference diversity and logged mean district magnitude. The random effects and autoregressive random effects models estimate the coefficient to be negative, but the pooled time series cross-sectional OLS and cross-sectional OLS using the Cox (1997) data both estimate it to be positive. Second, while the signs of most other coefficient estimates agree across models, the estimated magnitudes sometimes vary greatly. For example, the estimated coefficient on the latent preference diversity term ranges from 0.0231 to 0.224 for the cross-sectional OLS using the Cox (1997) data and random effect models (a factor of 9).

The best way to approach the issue is perhaps via pictures, in keeping with the old saying that a picture is worth a thousand words. Figure 5.2 graphs the predicted conditional effect of the latent preference variable for the OLS, random effects, and autoregressive random effects models under four potential institutional configurations: a parliamentary regime with a single-member, single tier, plurality electoral system like the United Kingdom; a parliamentary regime with a proportional representation, moderate mean district magnitude (of eight), single tier electoral system like Norway; a parliamentary regime with proportional representation and a single, nation-wide (large magnitude) electoral district like Israel; and a presidential regime with a single member, single tier, plurality legislative electoral system and two candidates with roughly equal support contesting executive elections like the United States. The inter-quartile range of the latent preference diversity variable is illustrated by the horizontal lines in the graphs while the actual range of the data is $[1.8, 4.2]$. (The empirical distribution of this variable is heavy tailed.)

For the polity with a Norway-like political institutional configuration, the three models make very similar predictions: the trends are almost identical over the range of latent preference diversity and the difference in the levels of the predicted conditional effects is small. However, for the other three institutional configurations, both the predicted trends and the levels vary. Moving across the inter-quartile range of latent preference diversity is predicted to have little effect on party system fractionalization by the OLS model but to increase fractionalization by both the random effects and autoregressive random effects models for the US- and UK-like institutional configurations. Conversely, for an Israel-like institutional configuration, moving across the inter-quartile range is predicted to increase fractionalization by the OLS model, to have little effect by the autoregressive random effects model, and to mildly decrease fractionalization by the random effects model. Differences in level are notable for the Israel- and US-like institutional configurations. Of course, most of the differences in the predicted conditional effects disappear once we put confidence intervals around the predictions. However, the confidence intervals do not always overlap: some differences survive. This aside, our best guesses—the point estimates—vary with the model, and it is these best guesses that guide policy-makers who are contemplating constitutional engineering in the real world.

In sum, both the conclusions we draw and the predictions we make depend upon the model specification.

5.2.2 Quantitative Analysis of the Separately-Elected Executive Party System with a New Data Set

Second, we now turn to a different original time-series cross-section data set in order to test hypotheses about the relationship of latent preference diversity to the number of parties or

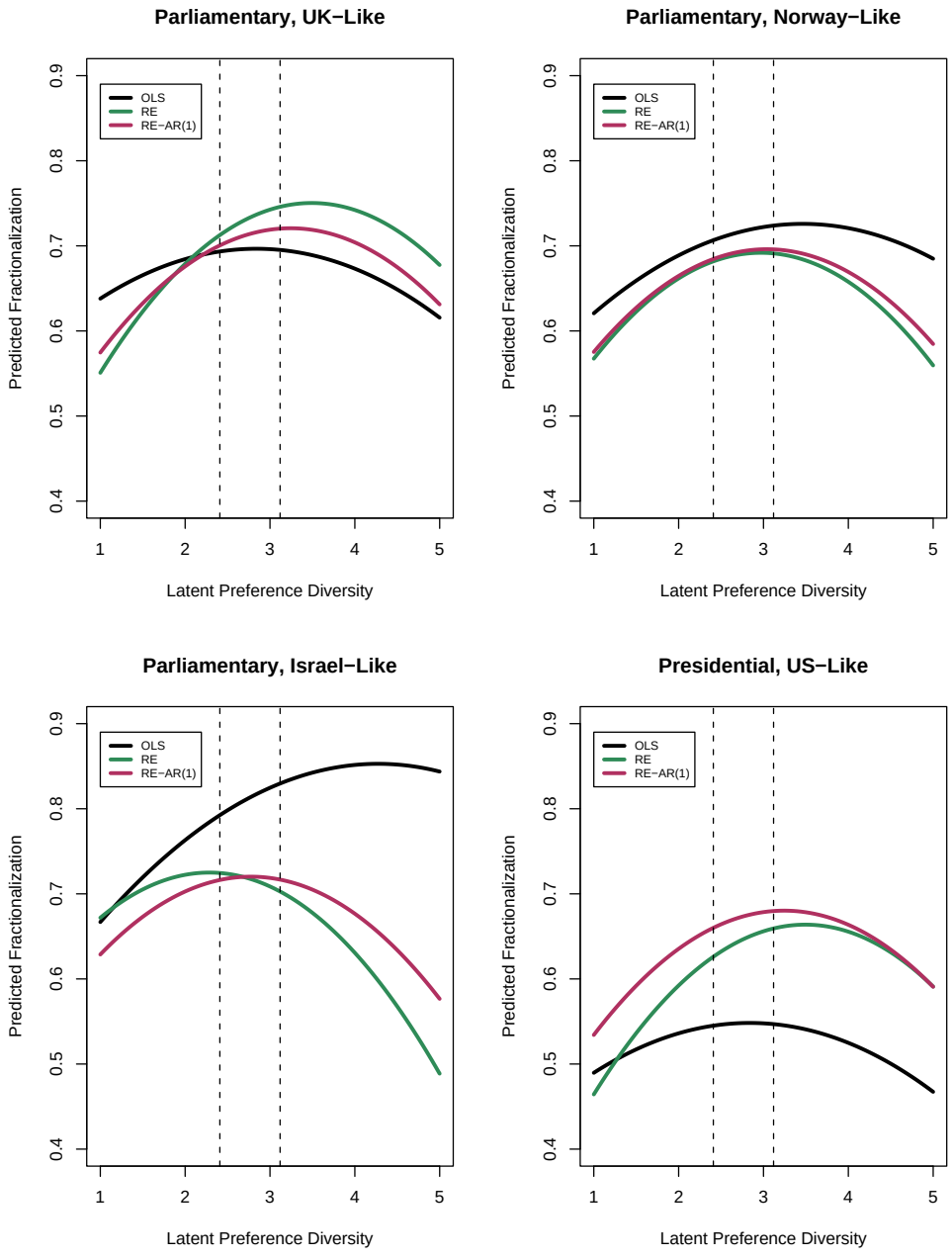

Figure 5.2: Estimated conditional effects of latent preference diversity for four political institutional configurations and three models of legislative elections.

candidates competing in separately elected *executive* elections.

Testable Hypotheses

The dependent variable in the model is the fractionalization of the presidential (or separately elected executive) candidate system, operationalized as usual by the summary measure F. Here, too, institutional variables are defined and operationalized similarly to Cox (1997): the one institutional covariate is a dummy variable indicating whether or not the electoral formula is a run-off of some sort instead of simple plurality.

As before, the preference variable in the model is the preferred measure of latent preference diversity introduced in Chapter 4. This is the additive index that combines indicators of the potential salience of the seven important latent cleavages. The problems identified in the prior sub-section with the use of this measure in models of legislative party systems do not plague analyses of executive party systems. The reason is that almost all separately elected executive elections take place in a single, nation-wide district. Hence, the coordination game is not two-stage: electoral and governing incentives coincide.

The testable hypotheses developed in the previous sub-section are applicable here with minor modifications. First, obvious substitutions need to be made, such as 'candidate' substituted for 'party'; 'executive' for 'legislative'; and 'runoff electoral system' for 'mean district magnitude'. Second, other institutional variables are not controlled for, so the *ceteris paribus* applying to the included covariates can be dropped.

The Data

The same criteria described in the prior sub-section for constructing the time series cross-sectional data set of legislative elections was applied to the construction of a time series cross-sectional data set of separately elected executive elections. The yield is initially two hundred and forty-four elections for a separately elected executive held in thirty-nine countries. After eliminating fused elections from the data set, two hundred and sixteen executive elections in thirty-seven polities remain. List-wise deletion of cases with missing data leaves two hundred and eleven executive elections in thirty-five countries. However, three of these countries have only one observation. Panel or time series cross-sectional analysis requires multiple observations on cross-sectional units, so these three countries are excluded from the data set. After this, the panel (or time series cross-section, depending on one's view) contains between two and fourteen observations on thirty-two countries for a total of two hundred eight observations, another extremely unbalanced panel by nature of the research question and design.

Inspection of this supposedly time series cross-sectional data immediately reveals a problem, though: there is little cross-time variance in the covariates. The latent preference diversity variable, of course, is time invariant. On the institutional front, only seven out of the thirty-two countries have changed from a plurality to a run-off electoral formula or vice-versa. While many countries have tinkered with details of their electoral formula such as whether 45% or an absolute majority of the vote is required to win in the first round of a run-off, the electoral system variable employed here does not pick up such nuances. Accordingly, most of the variance in the data is cross-sectional: we have repeated observations of outcomes on the same social and political institutional configurations. A better approach

is arguably cross-sectional. This can easily be done by taking country means, yielding a cross-sectional data set containing thirty-two observations indexed by country.

As before, the appendix contains detailed information about the data set.

Model Specification Issues

The specification issues discussed earlier with respect to models of the legislative party system apply equally to time series cross-sectional and cross-sectional models of the executive party (candidate) system. There is no need to review the issues here, so we proceed directly to the analysis, which includes the same battery of specification tests.

The Analysis

The testable hypotheses regarding the separately elected executive party (or candidate) system and latent cleavages yield the following linear-in-variables model:

$$\text{EECF}_{i,t} = \beta_0 + \beta_1 \text{RUN}_{i,t} + \beta_2 \text{LATCL}_i + \beta_3 \text{LATCL}_i^2 + \beta_5 \text{RUN}_{i,t} \times \text{LATCL}_i \ . \qquad (5.5)$$

Here, EECF is the fractionalization of the executive electoral party (or candidate) system; RUN is a dummy variable for a run-off electoral formula of some sort as opposed to simple plurality; and LATCL is latent preference diversity as before. As before, EECF has been transformed from effective number to fractionalization in order to reduce distributional skew and eliminate outliers. Also, i again indexes cross-sections (i.e., countries) and t time periods (i.e., elections).

Initial Check on Full Pooling Assumption

Bartels's pre-test estimator is used to initially check the full pooling assumption. Of the consolidated democracies in the separately elected executive data set, none have changed electoral systems. Ergo, the use of two pre-test estimators as in the legislative case is not possible here: we can only pit consolidated democracies with old electoral systems against unconsolidated democracies. One election from each of the thirty-two countries was selected to build a cross-sectional data set. The election chosen from each was the one closest to 1995. Using the same definition of consolidated democracies as before, OECD membership prior to 1990, the cross-section is partitioned into two sub-sections: seven consolidated and twenty-five unconsolidated democracies. To conduct the test, OLS was used to estimate equation 5.5 with the time series index dropped (i represents observations, now countries). Yet again, we fail to reject the null hypothesis of full pooling.[33] Surprisingly, the assumption of homoskedasticity (equal variance of the error processes in the sub-sections and pooled cross-section) does not appear badly violated here, despite the very unequal sub-section group sizes. We conclude that the improvement in fit from estimating two separate cross-sections does not outweigh the efficiency gains from pooling, which seems like common sense in light of the small sample size.

[33]The test statistic has value 0.738, which follows an F distribution with 5 and 22 degrees of freedom. The p-value is 0.603.

Test	Test Statistic	P-Value	Other
Serial correlation: Lagrange Multiplier	19.1	0.0000121	$\hat{\rho} = 0.318$
Serial correlation: simple regression of residuals on lag	4.56	0.00	$\hat{\rho} = 0.319$
Heteroskedasticity (general): White's General	18.9	0.0151	
Heteroskedasticity (panel): Wald	2603	0.00	
Heteroskedasticity (panel): Lagrange Multiplier	70.0	0.0000772	
Breusch-Pagan/Baltagi-Li Lagrange Multiplier for intercept unit heterogeneity	61.6	0.00	
Modified Hausman Test	0.491	0.483	

Table 5.4: Specification test results for the time series cross-sectional model of the executive party (candidate) system represented by equation 5.5, latent diversity on right-hand side.

Specification Tests

Initial estimation of the model represented by equation 5.5 is by OLS in `R`. The results of the various specification tests developed in a prior sub-section, which use the residuals from this estimation of the model, are summarized below in Table 5.4.

As was the case with the time series cross-sectional model for the legislative party system, estimation by OLS is problematic. Two of the three components of assumed error sphericality are violated: the disturbance process is heteroskedastic (most specifically, panel heteroskedastic) and displays mild serial correlation. Here, too, it is difficult to test the assumption of no contemporaneous correlation of the errors due to the many countries with few (for some, only two) observations and the extremely unbalanced nature of the panel. The earlier argument that this assumption is not likely to be violated for this type of data still holds, though; following most panel analysts, we should be reasonably safe assuming this potential problem away. Turning back to the full pooling assumption, the Breusch-Pagan Lagrange Multiplier test modified for unbalanced panels suggests that the model is misspecified: unit-specific intercepts are needed to account for differences in the level of the dependent variable across countries. This unmodeled heterogeneity is not correlated with the included covariates, though, so while both OLS and the random effects model are unbiased and consistent, the latter is the most efficient.[34]

Fitting a random effects model to the data seems to eliminate both heterogeneity and serial correlation. With respect to the latter, for example, estimates of ρ are small.[35] An

[34]The reported modified Hausman test results are based on one covariate: the dummy variable for a runoff electoral formula. Also including the interaction between this variable and latent preference diversity yields a test statistic of 0.00133 with a p-value of 0.999. See the discussion in the prior sub-section for more detail regarding this issue.

[35]Estimates from the fixed effects models, including and excluding the interaction between latent preference

	OLS	FE	RE	RE-AR(1)	Between
Intercept	−0.0157		0.0454	0.0562	0.248
(Std)	(0.214)		(0.365)	(0.365)	(0.398)
(PCSE)	(0.296)				
(White)	(0.279)				
RUN	0.146	0.0520	0.229	0.216	0.149
(Std)	(0.101)	(0.147)	(0.149)	(0.149)	(0.192)
(PCSE)	(0.143)				
(White)	(0.134)				
LATCL	0.361		0.308	0.307	0.216
(Std)	(0.142)		(0.248)	(0.248)	(0.269)
(PCSE)	(0.171)				
(White)	(0.163)				
LATCL^2	−0.0523		−0.0416	−0.0414	−0.0308
(Std)	(0.0241)		(0.0425)	(0.0424)	(0.0461)
(PCSE)	(0.0250)				
(White)	(0.0243)				
RUN × LATCL	−0.0258		−0.0566	−0.0523	−0.0356
(Std)	(0.0334)		(0.0474)	(0.0480)	(0.0643)
(PCSE)	(0.0442)				
(White)	(0.0422)				
n	208	210	208	208	32
R^2	0.113	0.451	0.105	0.106	0.0941

Table 5.5: Estimated coefficients and standard errors for the OLS, fixed effects, random effects, and autocorrelated random effects variants of the model represented by equation 5.5, latent preference diversity on right-hand side. Estimated random and fixed effects are not shown.

autoregressive random effects model does not seem called for, although it can be fitted for comparative purposes. Here is an example of autocorrelation resulting wholly from model misspecification, as described in a time series cross sectional political science context by Stimson (1985).

Results

Coefficient estimates and standard errors from the OLS, fixed effects, random effects, and autocorrelated random effects models are shown in Table 5.5. Also included are coefficient estimates and standard errors from the between estimator, which involves estimation of a cross-sectional version of equation 5.5 by OLS using data that is comprised of country means. Panel-corrected standard errors and White's heteroskedastic-consistent standard errors for the time series cross-sectional OLS model are shown for comparative purposes,

diversity and the runoff dummy variable, are −0.121 and −0.112, respectively. The estimate produced by the `lme` function in `R` is 0.0707. In a simple regression of the residuals from the fixed effects models on their lags, the lags are not significant at conventional levels (p-values are 0.0956 and 0.122, respectively).

despite the former's inappropriateness. The discussion below applies to the random effects model, unless otherwise noted, since it seems the most appropriate choice based on the above discussion.

What we see in Table 5.5 is similar to what we saw in the last sub-section. The relationship between latent preference diversity and the executive party (candidate) system is still weak. We again fail to reject the null hypothesis that the coefficients on the latent diversity and latent diversity squared terms are jointly zero using a Wald F-test; however, this time around, the p-value of the test statistic is more respectable: 0.173.[36] Likewise, we do not reject the one-sided null hypothesis that the coefficient on the square of latent preference diversity is zero or greater at conventional levels of significance. The p-value is now an even more respectable 0.168, though. The hypothesized conditional relationship between a runoff electoral system and latent diversity is again strongly rejected (the coefficient is the wrong sign).

Nevertheless, looking at the estimated coefficients and, most revealingly, the marginal effects, the data does suggestively—if not statistically—support the hypothesized relationship between latent diversity, the electoral system, and the number of electoral competitors. An increase in latent preference diversity only increases party system fractionalization to a point, after which it induces greater electoral coordination and leads to less fractionalization. The effect of latent preference diversity, in other words, depends on the current level of diversity: a non-linear relationship. Contrary to predictions, the same puzzling conditional relationship between latent preference diversity and electoral system restrictiveness observed in electoral contests for legislatures is observed in races for separately elected executive offices. For a given current level of latent preference diversity, any increase under a run-off electoral system encourages more electoral coordination than an equivalent increase under a plurality system, despite theoretical arguments that the opposite should be the case.

An interesting point of note is that conclusions drawn about substantive and statistical relationships are more robust to model specification in this case. The various models yield coefficient estimates with the same sign and rough magnitude, except for the intercept, leading to similar substantive conclusions. The only difference lies in statistical significance: the OLS model alone supports to the conclusion that latent preference diversity and its square are statistically significant at conventional levels, even using either of the two sets of robust standard errors in combination with OLS coefficient estimates.

Convergence in results regarding separately elected executive and legislative party systems is particularly intriguing. Recall that the status of the latent preference diversity variable differs in the two empirical analyses. The fact that the less problematic analysis of the executive party (candidate) system leads to the same conclusions as the problematic legislative party system strengthens our confidence in the latter results.

[36] As before, we cannot test the null hypothesis that these two terms plus the interaction term between latent diversity and the runoff dummy are jointly zero due to differences in degrees of freedom. Conducting the same test on a model that has already dropped the interaction term again fails to reject the null, however, with a p-value of 0.325.

	Factor Scores	Standard-ized Index	Ethnic Polariza-tion	Ethnic Fraction-alization	Religious Polariza-tion
Intercept	0.665	0.679	0.647	0.618	0.821
(Std)	(0.0303)	(0.0180)	(0.0425)	(0.0300)	(0.0734)
LML	0.00864	0.00796	0.0209	0.0276	−0.0493
(Std)	(0.00546)	(0.00559)	(0.0117)	(0.00962)	(0.0174)
LATCL	−0.0253	−0.000113	0.00402	0.0975	−0.477
(Std)	(0.0165)	(0.00632)	(0.192)	(0.164)	(0.261)
LATCL^2	0.00261	−0.00200	0.0499	0.0770	0.340
(Std)	(0.0322)	(0.00164)	(0.192)	(0.193)	(0.227)
LML × LATCL	0.0149	−0.00211	−0.0270	−0.0627	0.0895
(Std)	(0.00568)	(0.00303)	(0.0209)	(0.0291)	(0.0257)
$\text{UP}^{1/2}$	0.0910	0.0915	0.106	0.118	0.102
(Std)	(0.0297)	(0.0264)	(0.0266)	(0.0267)	(0.0260)
PROX	−0.148	−0.147	−0.145	−0.139	−0.145
(Std)	(0.0297)	(0.0299)	(0.0310)	(0.0313)	(0.0307)
EXECF	0.113	0.114	0.113	0.114	0.110
(Std)	(0.0203)	(0.0202)	(0.0209)	(0.0208)	(0.0208)
EXECF × PROX	0.185	0.182	0.179	0.167	0.182
(Std)	(0.0499)	(0.0503)	(0.0522)	(0.0526)	(0.0518)
n	634	634	651	647	651

Table 5.6: Estimated coefficients and standard errors from an autocorrelated random effects variant of the model represented by equation 5.1 using five different estimates of latent preference diversity from Chapter 4. Estimated random effects not shown.

5.2.3 Sensitivity to Operationalization of Latent Preference Diversity

This section reports the results of a sensitivity analysis. Instead of the additive index previously used to operationalize latent preference diversity, five other measures developed in Chapter 4 are employed. They are the regression scores from a principal factor analysis; an additive index of standardized indicators; ethnic polarization based on data from Alesina et al. (2003); the ethno-linguistic fractionalization index (ELF); and religious polarization based on data from Alesina et al. (2003). All other variables remain the same. As before, the five resulting models of both legislative (equation 5.1) and executive (equation 5.5) electoral contests are fit using the preferred model specification in `R`: autoregressive random effects and random effects, respectively. The number of cases varies over the models due to the use of list-wise deletion as the missing data strategy, also as before.

Coefficient estimates and standard errors for legislative electoral contests using the five different estimates of latent preference diversity are shown in Table 5.6. From this table, we can see that results are in fact sensitive to the operationalization of latent preference

	Factor Scores	Standard-ized Index	Ethnic Polariza-tion	Ethnic Fraction-alization	Religious Polariza-tion
Intercept	0.545	0.586	0.578	0.584	0.819
(Std)	(0.0431)	(0.0265)	(0.0527)	(0.0326)	(0.105)
RUN	0.0651	0.0609	0.0745	0.0321	0.111
(Std)	(0.0262)	(0.0243)	(0.0557)	(0.0314)	(0.0525)
LATCL	−0.0272	0.00905	−0.0947	−0.00567	−1.01
(Std)	(0.0220)	(0.00757)	(0.188)	(0.232)	(0.394)
LATCL^2	0.0363	−0.00122	0.169	0.0834	0.983
(Std)	(0.0424)	(0.00214)	(0.184)	(0.322)	(0.346)
RUN × LATCL	0.0151	−0.00845	−0.0324	0.0755	−0.121
(Std)	(0.0276)	(0.0100)	(0.0803)	(0.0920)	(0.0963)
n	208	208	210	210	210

Table 5.7: Estimated coefficients and standard errors from a random effects variant of the model represented by equation 5.5 using five different estimates of latent preference diversity from Chapter 4. Estimated random effects not shown.

diversity. The signs and magnitudes of the coefficients vary, as do the magnitudes of their estimated standard errors. First, the hypothesized non-linear relationship between latent preference diversity and party system fractionalization is less supported by the data, save for the religious polarization and standardized additive index operationalizations. For these two operationalizations, there is actually *more* support for non-linearity, although the nature of the estimated relationship differs from that found using the preferred additive index operationalization. Specifically, the factor scores and religious polarization operationalizations suggest a *convex* parabolic relationship between latent preference diversity and party system fractionalization instead of hte hypothesized concave parabolic relationship. However, the suggested relationship is both weaker and non-parabolic for the remaining three operationalizations. Second, the factor scores and religious polarization operationalizations yield different estimates of the conditional relationship between mean district magnitude and latent preference diversity. For these two operationalizations, the estimated marginal effect of latent preference diversity increases in mean district magnitude, as the theoretical literature hypothesizes. The remaining three operationalizations yield estimates that are in accord with the original puzzling findings using the additive index: that the estimated marginal effect of latent preference diversity decreases in mean district magnitude.

Similarly, coefficient estimates and standard errors for executive electoral contests using the five estimates of latent preference diversity are shown below in Table 5.7. We again see that results are somewhat sensitive to the operationalization of the latent preference diversity variable. Over all, roughly similar levels of support are provided for the non-linear relationship between latent preference diversity and executive party (candidate) system fractionalization. However, the squared latent preference diversity term is actually statistically significant at the 0.10 level for the religious polarization operationalization, more support

than the original additive index provided, although it is much less significant for the ELF operationalization. As far as the nature of the non-linear relationship goes, there is again no support for the hypothesized concave parabolic relationship found using the additive index. All operationalizations do suggest a *convex* parabolic relationship, though. In contrast to the legislative electoral contest sensitivity analysis, it is now the factor scores and the ELF (instead of religious polarization) operationalizations that support the hypothesized conditional relationship between mean district magnitude and latent preference diversity, contra to the results obtained using the original additive index and the remaining three operationalizations in the sensitivity analysis.

All in all, this section has shown that results are sensitive to the operationalization of latent preference diversity. Earlier sections illustrated sensitivity to model specification. We are naturally led by these observations to the question of which conclusions we should draw. To some degree, the choice can be left to the reader, who has at her disposal the results from different model specifications and different operationalizations of latent preference diversity. However, to some degree, it should not be. This chapter previously argued in support of the autoregressive or non-autoregressive random effects model specifications on both theoretical and empirical grounds. Similarly, when it comes to the operationalization of the latent preference diversity variable, there are theoretical reasons for preferring the additive index developed in Chapter 4, as that chapter argued. If readers disagree, they may base their conclusions upon the models and results presented in this section. But then they must develop their own arguments in support of their preferred operationalization. The very different results that are obtained using ethnic and religious polarization as operationalizations underscores this point. We need theoretical guidance to decide which of the two cleavages is the better proxy for the abstract concept, as well as why we should only tap one out of the many potential cleavages that comprise the cleavage structure of a country.

Although this section further underscores the sensitivity of the results, the thesis has hopefully made a compelling case for its choice of operationalization and model specification. To the extent that readers agree with the arguments laid out in this and earlier chapters, they should be confident in the conclusions drawn.

5.3 Empirical Analysis: Particized Preference Diversity

The final empirical matter is the data's support for the hypothesized relationship between the number of particized cleavages and the party system.

As before, we initially present some suggestive cross-national evidence in Table 5.8. The same countries that appeared in Table 5.1 are used below. There are two differences between the Tables. First, the mean dimensionality of the particized ideological space calculated in Chapter 4, mean NP_v, appears in the third column of Table 5.8 instead of latent diversity. Second, the estimates of the effective number of legislative electoral parties that populate the second column of Table 5.8 are not identical to those in Table 5.1 due to different elections included in the two data sets.

In Table 5.8, the effective number of electoral parties increases as one moves down the rows, supporting the hypothesis that restrictive electoral systems encourage pre-electoral coordination. In contrast to latent diversity, the relationship between the number of particized cleavages and the effective number of electoral parties seems to depend upon electoral

Country	Mean N	Mean Dimensionality
M = 1		
Canada	3.15	1.37
UK	2.72	1.47
US	2.09	2.27
M = 3–5		
Ireland	3.14	1.15
Iceland	3.96	1.19
Japan	3.55	1.49
M = 10–13		
Sweden	3.58	1.24
Finland	5.55	1.32
M = 120–50		
Netherlands	4.97	1.65
Israel	4.93	2.12

Table 5.8: Mean effective number of electoral parties in legislative elections and mean particized ideological space dimensionality for selected countries, sorted by decreasing electoral system restrictiveness. Data from data set described below.

system restrictiveness. For the most restrictive (single member plurality) systems, increasing the dimensionality decreases the number of electoral competitors. In the next most restrictive group, an initially positive relationship turns negative. A conventionally positive relationship appears in the third group while in the most permissive fourth group there is little (a slightly negative) relationship. The United States again has exceptionally few parties given its diversity. This time, however, the other extreme is claimed by Finland, which has the highest ratio of parties to cleavages.

To tease out this suggestive empirical relationship, an extension of Amorim Neto and Cox's (1997) and Cox's (1997) empirical models for legislative party systems is estimated in keeping with the theory sketched out in the first section. Note that this enterprise is inherently flawed if political cleavages are in fact endogenous to electoral systems and if the errors from the two processes are correlated. In this case, we are estimating one equation in a structural model by OLS, which will yield biased and inconsistent coefficient estimates. Lacking another way to proceed (i.e., lacking measures of political preferences), we forge on ahead while stipulating that the results be taken with a hearty grain of salt.

5.3.1 Quantitative Analysis of the Legislative Party System with a New Data Set

Preliminaries

Similar testable hypotheses obtain to those developed in the first of the two prior empirical sub-sections. 'Latent' merely needs to be replaced with 'particized'. Specifically, the number of particized cleavages calculated using the polity–time variant method and Molinar's sum-

mary measure (NP), the preferred measure of particized preference diversity from Chapter 4, replaces latent preference diversity on the right-hand side. The linear-in-variables model follows:

$$\begin{aligned} \text{EPSF}_{i,t} &= \beta_0 + \beta_1 \text{UP}_{i,t}^{1/2} + \beta_2 \text{LML}_{i,t} + \beta_3 \text{PC}_i + \beta_4 \text{PC}_i^2 \\ &\quad + \beta_5 \text{LML}_{i,t} \times \text{PC}_i + \beta_6 \text{PROX}_{i,t} + \beta_7 \text{EXECF}_{i,t} \\ &\quad + \beta_8 \text{PROX}_{i,t} \times \text{EXECF}_{i,t} + \epsilon_{i,t} \ . \end{aligned} \tag{5.6}$$

Note the replacement of 'LAT' by 'PC', the number of particized cleavages. Also note that we must confront the same model specification issues both prior time series cross-sectional empirical analyses confronted.

The data set from the first empirical sub-section serves as the cornerstone of this one. Cases remain country–elections, although the set of country–elections included differs. Data on particized dimensionality is only available for the set of countries and elections analyzed by the Comparative Manifestos Project, which differs from the set of cases included in the prior data set. The Comparative Manifestos Project coverage only extends to the mid-1990s, for example, instead of to 2002 and is limited to advanced industrial democracies. Accordingly, only the intersection of the Comparative Manifestos Project and the time series cross-sectional legislative election data set developed by the thesis is used for the analysis in this sub-section. There are a total of three hundred and forty-seven such legislative elections in twenty-four countries. The twenty-four countries, of course, are the twenty-four advanced industrial democracies included in the Comparative Manifestos Project. All of these cases are fully observed. Note that five country–elections included in the Comparative Manifestos Project were either overlooked during the construction of the thesis's time series cross-sectional legislative election data set or were deliberately excluded. See the Appendix for further details.

The Analysis

We proceed as before with the analysis.

Initial Check on Full Pooling Assumption

Since the sample is comprised solely of consolidated democracies and there were few significant changes in legislative electoral systems during the period analyzed by the Manifesto Research Group, we forego the pre-test estimation check on the full pooling assumption. At any rate, starting with such a small N, it is highly unlikely that the null hypothesis of pooling two cross-sectional sub-samples would be rejected.

Specification Tests

As usual, initial estimation of the model represented by equation 5.6 is by OLS in R. The results of various specification tests, which use the residuals from this estimation of the model, are summarized in Table 5.9.

At the risk of sounding repetitious, it must again be noted that estimation by OLS is problematic. The disturbance process is both heteroskedastic (most specifically, panel heteroskedastic) and highly serially correlated. Contemporaneous correlation is assumed away for the same reasons as before, an assumption that cannot be tested, again for the same reasons as before. Since model misspecification may be behind the observed heteroskedasticity

Test	Test Statistic	P-Value	Other
Serial correlation: Lagrange Multiplier	184	0.00	$\hat{\rho} = 0.783$
Serial correlation: simple regression of residuals on lag	4.56	0.00	$\hat{\rho} = 0.745$
Heteroskedasticity (general): White's General	173	0.00	
Heteroskedasticity (panel): Wald	1418	0.00	
Heteroskedasticity (panel): Lagrange Multiplier	98.5	0.00	
Unit-specific intercepts: Breusch-Pagan/Baltagi-Li Lagrange Multiplier	451.9	0.00	
Unit-specific intercepts: F-test	22.0	0.00	
Modified Hausman Test	0.00518	1.00	

Table 5.9: Specification test results for the time series cross-sectional model of the legislative party system represented by equation 5.6.

and serial correlation, the Breusch-Pagan Lagrange Multiplier test modified for unbalanced panels tests the null hypothesis of a common intercept against the alternative of country-specific one. So, too, does an F-test for the joint significance of the $N - 1$ country dummy variables in the fixed effects model. (Now that we have no time invariant covariates, we can estimate a fixed effects model and for the first time employ the latter test.) Both tests support the conclusion that the model is misspecified: unit-specific intercepts are needed to account for differences in the level of the dependent variable across countries. As far as the appropriateness of the random effects model goes, a Hausman test suggests that it is unbiased.

Fitting a random or fixed effects model to the data seems to eliminate heterogeneity but not serial correlation. In a regression of the residuals from the fixed effects model on their lags, ρ is estimated to be 0.551 and the lags are statistically significant. Combined, these two pieces of information tell us that while the amount of serial correlation has been much reduced by model re-specification, it is high enough to still constitute a problem.[37] Either an autoregressive random effects model is called for or, as Beck and Katz (1996) argue, dynamics must be explicitly incorporated in the model. Both approaches seem justifiable here.

On the one hand, we remain skeptical about the theory behind a dynamic model, as discussed earlier. Moreover, on a practical level, the serial correlation is substantially less than one, the correction for which does not come close to effectively first differencing the

[37] Once again, the estimate produced by the `lme` function in `R` differs from the one presented here: it is a whopping 0.875.

data.[38] Further, estimation of fixed and random effects dynamic models is complicated. Since the lagged dependent variable is correlated with the disturbance, which yields biased and inconsistent estimates, the usual FGLS or OLS estimators cannot be used. The standard approach to dynamic fixed or random effect models relies on instrumental variable estimators and a GMM estimator (Greene 2003, 307–314). Do we want to resort to such complicated estimation techniques? To accommodate both dynamics and country heterogeneity in the model, we must. On the other hand, the amount of serial correlation is large enough that we should be uncomfortable with labeling it a nuisance. Doing so would violate this chapter's twist on Beck and Katz's argument in addition to their original one.

Overall, the stronger theoretical case for unit heterogeneity than for dynamics combined with a preference for simpler models and practical concerns leads to a decision for the autoregressive random effects model. That is, we choose to not model dynamics explicitly, despite some trepidation about this choice.

Results

Coefficient estimates and standard errors from the OLS, fixed effects, random effects, and autocorrelated random effects models are shown in Table 5.10. Also included are coefficient estimates and standard errors from a dynamic model, which includes the lagged dependent variable on the right-hand side. Although this is not our model of choice, it is shown in the table so that those whose inclinations differ may evaluate it. Panel-corrected standard errors and White's heteroskedastic-consistent standard errors for both the time series cross-sectional and dynamic OLS models appear as well. Not shown in the table is an OLS estimation of Taagepera and Grofman's (1985) simple model with only an intercept and the particized cleavage variable on the right-hand side. The estimated values of these terms are 0.681 and 0.0214, respectively; the latter's standard error is estimated to be 0.0123, so it is significant at the 0.10 level. Overall R^2 for the model is only 0.0906.

First, the Taagepera and Grofman model is clearly inferior to the others presented in Table 5.10 in terms of goodness of fit. Further, the coefficient estimates for the former certainly do not resemble the published estimates, which were obtained using the flawed Lijphartian data. The theory (also taken up by Lijphart) that $N = I + 1$ (Taagepera and Grofman 1985) is no longer supported by the data. At any rate, this model is flawed for the reasons discussed in Chapter 3 and in the initial section of this chapter.

Second, turning from this model to the more sophisticated ones, some of the conclusions drawn in prior sections about how the latent cleavage structure impacts the party system can be extended to the particized cleavage structure. At first glance, Table 5.10 looks similar to Tables 5.3 and 5.5, particularly in the signs of the estimated coefficients. Note that the discussion that follows applies to the autoregressive random effects model. The extent to which conclusions vary with the model chosen, which in this case is not trivial, is discussed at the end of the section.

Overall, the dimensionality of the particized ideological space is very weakly and non-linearly related to legislative party system fractionalization. The individual particized preference terms are not significant at conventional levels, although the interaction between par-

[38] Beck and Katz (1996) make the point that some time series cross section analyses have transformed data to eliminate serial correlation when $\hat{\rho}$ was as high as 0.9, which does amount to effective first differencing. As they argue, this changes the meaning of the model estimated from a long-run relationship between series to a short-term one.

	OLS	FE	RE	RE-AR(1)	OLS LDV
Intercept	−0.468		0.564	0.674	0.0615
(Std)	(0.0576)		(0.0466)	(0.0333)	(0.0328)
(PCSE)	(0.0582)				(0.0324)
(White)	(0.0503)				(0.0319)
LML	0.0187	−0.00897	−0.00230	0.00410	0.00253
(Std)	(0.0104)	(0.0109)	(0.0103)	(0.00885)	(0.00546)
(PCSE)	(0.00839)				(0.00622)
(White)	(0.00867)				(0.00510)
PC	0.227	0.108	0.121	0.0190	0.0352
(Std)	(0.0685)	(0.0485)	(0.0484)	(0.0309)	(0.0362)
(PCSE)	(0.0715)				(0.0358)
(White)	(0.0609)				(0.0327)
PC^2	−0.06233	−0.0245	−0.0292	−0.00785	−0.00718
(Std)	(0.0202)	(0.0142)	(0.0142)	(0.00859)	(0.0107)
(PCSE)	(0.0214)				(0.0106)
(White)	(0.0178)				(0.00944)
LML × PC	0.00750	0.00552	0.00697	0.00693	0.000903
(Std)	(0.00619)	(0.00521)	(0.00516)	(0.00383)	(0.00322)
(PCSE)	(0.00510)				(0.00381)
(White)	(0.00529)				(0.00280)
$UP^{1/2}$	0.0486	0.178	0.157	0.0765	−0.00519
(Std)	(0.0179)	(0.0365)	(0.0331)	(0.0310)	(0.0163)
(PCSE)	(0.0186)				(0.0161)
(White)	(0.0183)				(0.0156)
PROX	−0.379	−0.0473	−0.0703	0.000588	−0.0667
(Std)	(0.0520)	(0.0494)	(0.0478)	(0.0316)	(0.0285)
(PCSE)	(0.0652)				(0.0295)
(White)	(0.110)				(0.0460)
EXECF	0.0706	−0.00144	0.00748	0.0164	0.00843
(Std)	(0.0270)	(0.0346)	(0.0318)	(0.0254)	(0.0140)
(PCSE)	(0.0298)				(0.0106)
(White)	(0.0249)				(0.0119)

continued on next page

Table 5.10: Estimated coefficients and standard errors for the OLS, fixed effects, random effects, autocorrelated random effects, and dynamic (lagged dependent variable) OLS variants of the model represented by equation 5.6. Estimated random and fixed effects are not shown.

continued from previous page

	OLS	FE	RE	RE-AR(1)	OLS LDV
EXECF × PROX	0.498	0.0911	0.117	0.0130	0.0896
(Std)	(0.0989)	(0.0838)	(0.0816)	(0.0521)	(0.0521)
(PCSE)	(0.122)				(0.0506)
(White)	(0.186)				(0.0772)
LDV					0.862
(Std)					(0.0284)
(PCSE)					(0.0289)
(White)					(0.0301)
n	346	346	346	346	322
R^2	0.424	0.780	0.111	0.212	0.853

Table 5.10: continued.

ticized preferences and logged mean district magnitude is. More importantly for this type of model, we fail to reject the null hypothesis that the coefficients on the three terms involving particized preferences are jointly zero, although the p-value approaches respectability.[39] The data clearly does not offer *statistical* support for the hypothesis. This conclusion is surprising. We anticipated only a weak statistical relationship between latent preference diversity and party system fractionalization. However, theoretical arguments about the causal links between the dimensionality of the particized ideological space and party system fractionalization led us to predict a stronger statistical relationship here. To further complicate matters, the substantive significance of this variable is negligible. For the most part, changes in the dimensionality of the particized ideological space do not translate into changes in legislative party system fractionalization. As far as the nature of the relationship goes, the response function with respect to the dimensionality of the particized ideological space is a concave parabola, but barely. The magnitude of the coefficient on the quadratic term is so small relative to that on the linear term that the nonlinearity is not pronounced over the range of the data.

On a more positive note, of particular interest here is a different finding regarding the conditional relationship between the dimensionality of the particized ideological space and the logged mean district magnitude. The estimated coefficient on the interaction term is positive for the first time and significant at the 0.10 level for a two-sided test (not to mention significant at the 0.05 level for the one-sided test). Statistical support for the hypothesized interactive relationship has finally appeared. The data now suggests that for a given initial dimensionality, an increase in dimensionality will produce greater party system fractionalization at higher district magnitudes than at lower ones. This is evident from the formula for its marginal effect:

$$\frac{\partial \hat{E}\left[\text{EPSF}|\text{X}\right]}{\partial \text{PC}} = 0.0189 + 0.00693 \text{ LML} - 0.0157 \text{ PC} , \tag{5.7}$$

where X again represents all covariates.

[39] A Wald F-test for the significance of particized dimensionality, its square, and its interaction with logged mean district magnitude yields a test statistic of value 1.31 with a p-value of 0.273.

Figure 5.3 visually displays the estimated marginal effects of particized dimensionality. Each curve corresponds to one of three initial dimensionalities of the particized issue space—the minimum, median, and maximum dimensionalities—and the effects are shown over the range of mean district magnitude. What we see in this figure is that an increase in dimensionality at an initial state of low to moderate dimensionality is predicted to increase party system fractionalization. As mean district magnitude increases, the predicted effect increases. However, an increase in dimensionality for countries with already high-dimensional ideological space will conversely promote party system consolidation except under very permissive electoral systems, where it will have a small, positive effect. Additionally, the impact of an increase will not be great in countries with a few to a moderate initial number of particized cleavages and a restrictive electoral system.

Third and finally, the choice of a model and estimation strategy greatly affects the conclusions drawn about the relationship between particized preferences and legislative party system fractionalization. To begin, the issue of statistical significance. In contrast to the autoregressive random effects model, all four other models reject the null hypothesis in an F-test for the joint significance of the three terms involving the dimensionality of the particized ideological space at conventional or near conventional levels (the maximum p-value is 0.117 for the dynamic model). The individual linear and quadratic terms are significant in the standard OLS, the fixed effects, and the random effects models although not in the dynamic and autoregressive random effects models. While the interaction term is not significant at conventional levels for any of the other four models, it comes close in the random effects model. Second, the issue of the nature of the relationship. All four other models agree with the autoregressive random effects model on the direction of the conditional relationship between logged mean district magnitude, particized preferences, and party system fractionalization. They also all agree upon the type of non-linear relationship between particized preferences and party system fractionalization. However, the non-linear relationship is stronger in the other models than in the autoregressive random effects model. Third, they again part ways when it comes to substantive significance. This point is best illustrated graphically, which Figure 5.4 does. Its four component graphs are constructed similarly to those in Figure 5.2. The autoregressive random effects model stands out from the other two. The standard OLS and random effects models both predict a much greater impact on legislative party fractionalization from changes in the dimensionality of the particized ideological space over the range of the data for a variety of political institutional configurations. The relative linearity of the conditional effects predicted by the autoregressive random effects model is also apparent in the figure.

While the lack of statistical and substantive significance of particized preference diversity in the autoregressive random effects model has been a disappointment, we can at least console ourselves with the knowledge that our chosen model is the most conservative by far. The same is true for the near linearity of the relationship between particized preference diversity and legislative party system fractionalization.

5.3.2 Sensitivity Analysis to Operationalization of Particized Preference Diversity

The final task that will conclude the empirical analysis is a sensitivity analysis. As before, five different measures of particized preference diversity developed in Chapter 4 are em-

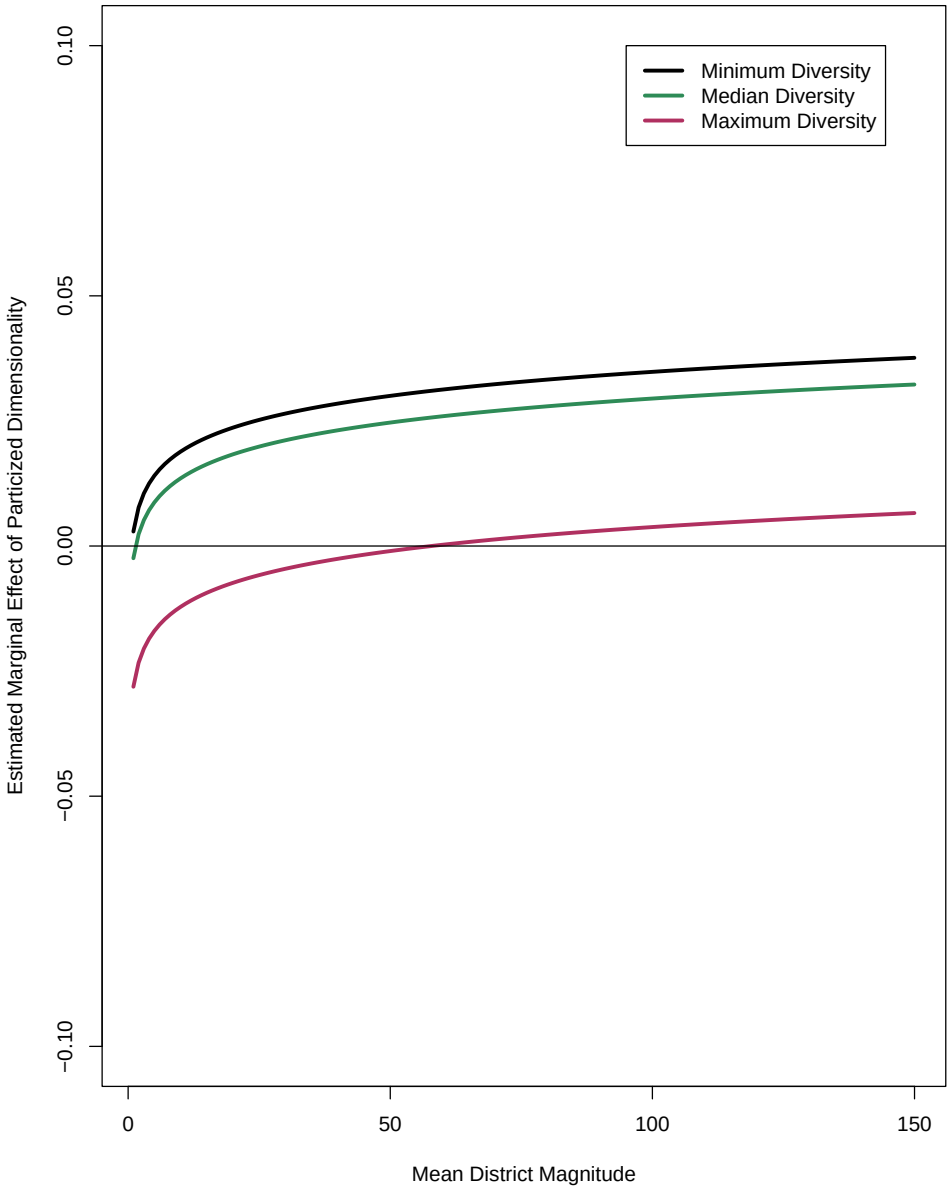

Figure 5.3: Estimated marginal effects of particized dimensionality over the range of mean district magnitude for the minimum, median, and maximum values of particized dimensionality, legislative elections.

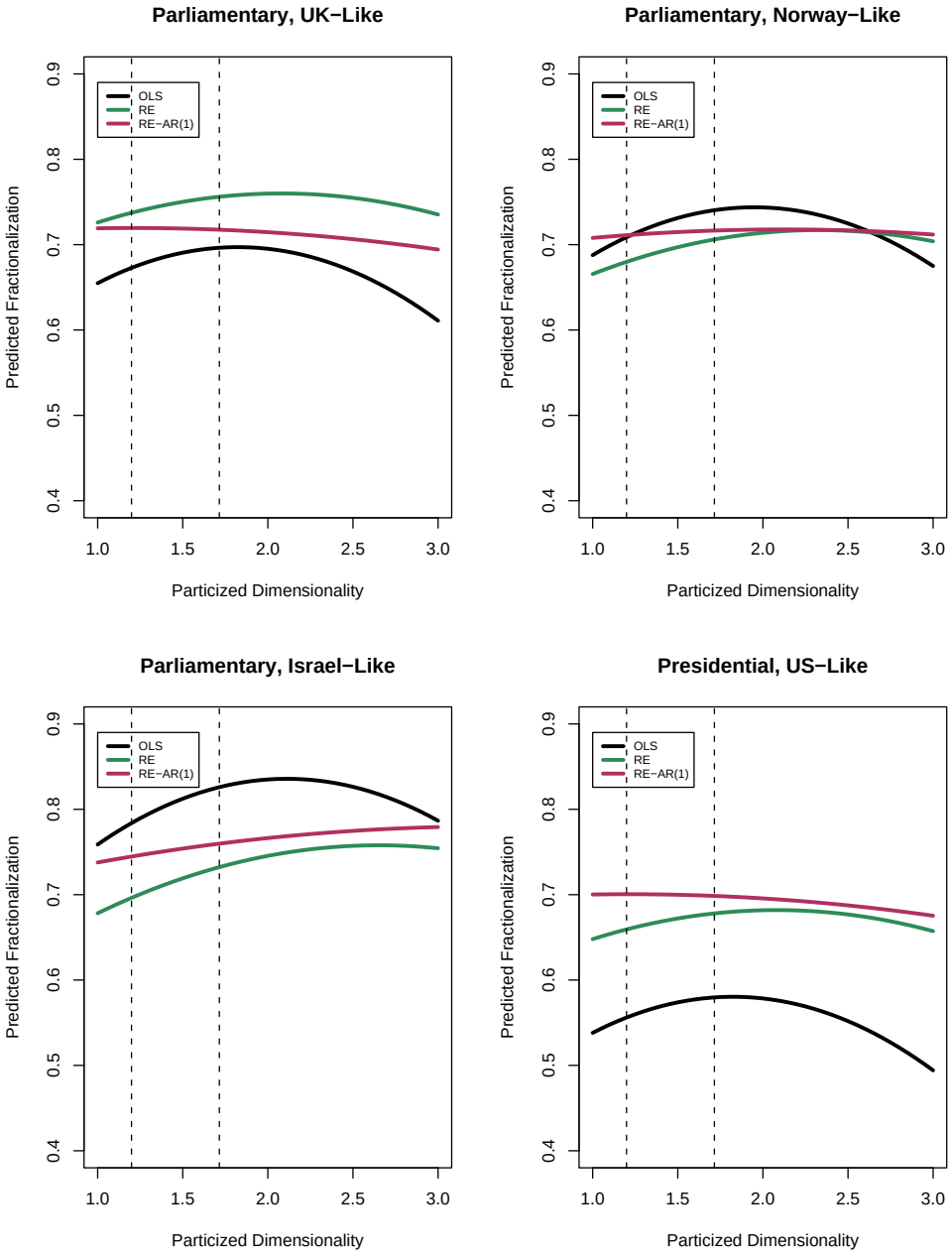

Figure 5.4: Estimated conditional effects of particized dimensionality for four political institutional configurations and three models.

	N_v	NL_v	N_i	NP_i	NLi
Intercept	0.674	0.700	0.659	0.660	0.668
(Std)	(0.0429)	(0.0286)	(0.0408)	(0.0310)	(0.0241)
LML	0.00189	0.00877	0.00753	0.00847	0.0123
(Std)	(0.0110)	(0.00807)	(0.0111)	(0.00858)	(0.00751)
PC	0.0128	−0.0225	0.0237	0.0340	0.0257
(Std)	(0.0294)	(0.0280)	(0.0287)	(0.0282)	(0.0187)
PC^2	−0.00337	0.00724	−0.00529	−0.0118	−0.00949
(Std)	(0.00570)	(0.00908)	(0.00578)	(0.00812)	(0.00598)
LML × PC	0.00494	0.00412	0.00300	−0.0627	0.00254
(Std)	(0.00335)	(0.00334)	(0.00345)	(0.0291)	(0.00301)
$UP^{1/2}$	0.0757	0.0751	0.0748	0.0752	0.0745
(Std)	(0.0310)	(0.0310)	(0.0310)	(0.0310)	(0.0310)
PROX	0.000902	0.00963	0.000839	−0.000243	0.0000705
(Std)	(0.0316)	(0.0316)	(0.0317)	(0.0316)	(0.0316)
EXECF	0.0162	0.0205	0.0150	0.0159	0.0140
(Std)	(0.0255)	(0.0256)	(0.0255)	(0.0254)	(0.0256)
EXECF × PROX	0.0126	−0.00175	0.0127	0.0139	0.0113
(Std)	(0.0522)	(0.0520)	(0.0523)	(0.0522)	(0.0522)
n	346	346	346	346	346

Table 5.11: Estimated coefficients and standard errors from an autocorrelated random effects variant of the model represented by equation 5.6 using five different estimates of particized preference diversity from Chapter 4. Estimated random effects not shown.

ployed in the model represented by equation 5.7 in place of the preferred measure utilized above, NP_v. Recall that this is Molinar's (1991) summary measure NP applied to cleavage salience calculated using the polity–time variant method. The five alternative measures are NP_i, Molinar's (1991) summary measure NP applied to cleavage salience calculated using the polity–time invariant method; N_v, the summary measure N applied to cleavage salience calculated using the polity–time variant method; NL_v, the Lijphartian-inspired summary measure applied to cleavage salience calculated using the polity–time variant method; N_i, the summary measure N applied to cleavage salience calculated using the polity–time invariance method; and NL_i, the Lijphartian-inspired summary measure applied to cleavage salience calculated using the polity–time invariant method.

Coefficient estimates and standard errors for legislative electoral contests using the five different estimates of particized preference diversity are shown in Table 5.11. This time around, results are not very sensitive to the operationalization of the particized preference diversity variable. The signs and magnitudes of most coefficients as well as the magnitudes of most standard errors are similar to those attained using the preferred operationalization, NP_v.

First, all save for NL_v suggestively support the hypothesized concave parabolic relationship bewteen particized preference diversity and legislative party system fractionalization,

as did the original operationalization. This one anomolous operationalization instead supports a convex parabolic relationship, which is at least still non-linear. Second, all except NP_i suggestively support the hypothesized conditional relationship between particized preference diversity and logged mean district magnitude, although the support is statistically weaker across the board than with the original operationalization. Third and finally, for two operationalizations, NL_i and NP_i, the squared preference diversity variable now approaches statistical significance at conventional levels (the p-values are 0.114 and 0.146, respectively). Further, the coefficient on the squared term for the latter operationalization is of a relatively large magnitude, leading to a prominently non-linear estimated relationship relative to the other operationalizations, where the non-linearity is not pronounced over the range of the data.

All in all, then, a sensitivity analysis reveals that for the most part, we need not worry about which operationalization of particized preference diversity is employed on the right-hand side of the model. This is not entirely surprising given the results of the non-parametric rank tests for independence in Chapter 4. That comparison of the measures found them all to be tapping the same underlying quality, which should lead to similar results when they are employed in a model.

5.4 Conclusion

This chapter argued for a macro-level nonlinear relationship between preference diversity and the number of competitors in legislative and separately elected executive elections. Less strongly, it sided with existing literature in arguing that this relationship is conditional upon electoral system restrictiveness. At the micro-level, it made the case that the mechanism underlying the observed aggregate level relationship is strategic behavior by political entrepreneurs and elites, particularly the former. The logic is straight-forward. Increasing the number of latent, political, or particized cleavages (and hence presumably the number of latent and political groups) in a polity provides incentives to entrepreneurs to supply political representation only up to a point. Beyond this point, the minimum size principle that a pre-electoral coalition should generally be both electorally and governmentally viable comes into play. As a result, sufficiently diverse polities are likely to either see no change in their party system following changes in the societal landscape (i.e., existing parties re-align themselves to accommodate the new cleavage) or to see broader pre-electoral coalitions constructed that consolidate the party system.

New time series cross-sectional data sets and the measures of preference diversity developed in Chapter 4 were used to empirically assess the theoretical hypotheses. Model specification issues, usually brushed under the rug, were taken seriously. The chapter argued that the accepted approach to time series cross sectional analysis in comparative politics, that of Beck and Katz (1995), may not always be appropriate. This has consequences for the conclusions drawn from empirical research as results (both point estimates and statistical significance) were shown to be sensitive to model specification. Specifically, substantive and statistical significance were usually attenuated by moving beyond the Beck and Katz procedures. Further, substantive conclusions (such as predicted effects) varied with the model.

These issues aside, statistical significance was surprisingly low for the models of choice (random effects or autoregressive random effects models), generally the most conservative

of the alternatives considered. Certainly, conventional levels of statistical significance were not usually attained. Momentarily leaving aside the issue of the linearity or nonlinearity of the relationship, statistical support for the overall theoretical hypothesis (e.g., the existence of *any* relationship) was weak. This was to some degree expected in the case of latent diversity, an admittedly poor instrument for politicized diversity, but not in the case of particized diversity. As far as the hypothesized non-linear relationship goes, the model relating latent diversity to the legislative and executive party systems came close to supporting it statistically, although this was not the case with the model relating particized diversity to the legislative party systems. Most importantly, the data always suggestively—in terms of estimated coefficient signs—supported the hypothesized nonlinear (concave parabolic) relationship. For the latent diversity models, the magnitude of the nonlinear effect was pronounced; for the particized diversity models, however, it was negligible over the range of the data. Further, the hypothesized conditional relationship between preferences and electoral system restrictiveness was only supported by the particized diversity model. However, unresolved endogeneity problems suggest that these results should be viewed somewhat skeptically. The more complex models suggested here did outperform their competitors, however (the Amorim Neto and Cox (1997) and Taagepera and Grofman (1985) models for latent and particized diversity, respectively), which also struggled with statistical significance.

All in all, we clearly have more work to do in developing models of party systems. Institutional covariates are in need of refinement and issues concerning party system consolidation and learning should be directly incorporated in models. Most importantly, we need to account for the null findings of this chapter. Partial blame may be ascribed to the use of aggregate level data in these analyses when the effects of interest primarily operate at the district level, an issue that an earlier section of the chapter raised. On this note, future work certainly remains to be done with respect to the preferences variable: for example, in models of legislative party systems, we really should have district-level measures of diversity. Regardless, the theoretical and empirical results presented here will hopefully serve as a springboard for researchers turning to these tasks. They should also serve as a reminder that the preferences variable, theoretically and empirically impoverished for too long, should not always play second fiddle to its institutional counterparts.

Part III

The Big Picture

Chapter 6

Beyond the Number of Competitors

Where do politicized and particized cleavages come from? And what does the empirical relationship between latent and particized cleavages say about democratic theory? This chapter takes a step back from the electoral and party systems literature in order to examine societal inputs into the political process through a wide-angle lens. It explores the extent to which features of society such as ethnic polarization and a history of military conflict shape the political agenda, the types of issues that are the subject of political debate. It also investigates claims about the effect of restrictive electoral systems upon the number of particized cleavages in a polity. Essentially, this chapter begins tackling the broader normative question of interest by dispensing with the seemingly irrelevant link between society and the number of political parties.

6.1 Sketching a Theory

What are the micro- and macro-level processes that turn latent into politicized and politicized into particized cleavages? Earlier, the thesis argued that failing to pay due heed to the endogeneity of particized cleavages leads to a flawed model of the relationship between political cleavages, particized cleavages, electoral systems, and the number of electoral parties or candidates. This section first discusses macro-level hypotheses that explain variance in the political and particized cleavage structures of societies and then turns to the microfoundations of the macro-level hypotheses.

At the macro-level, the literature is sparse on hypotheses that explain the dependent variable of political cleavage structure. Initially, what emerges is the hypothesis that latent and political cleavages do not have a one-to-one relationship, as initially discussed in Chapter 2.

Most research consists of case studies, which are rich in historical detail but do not contain meaningful generalizable hypotheses. For example, Posner (N.d.) explores the origins of the political cleavage structure in Zambia.[1] He argues that political cleavage structures

[1] Posner's (N.d., 19) ethnic cleavage structure corresponds to what the thesis has called the political cleavage structure: it contains the cleavages that individuals view "as commonsensical alternatives for dividing up the political landscape." There will be bases of social life that individuals do not identify with and view

are the product of specific state policies, regulations, and administrative structures, which operate over the long-term to shape subconscious social learning and conscious investments by individuals in particular group memberships. Over two chapters, Posner's book tells a convincing story of how the colonial state and its allies slowly but surely shaped a political cleavage structure comprised of two cleavages (tribal and linguistic) in Zambia. However, the generalizable hypothesis that we can extract from his work is that 'political institutions matter,' a hypothesis with which few political scientists nowadays would disagree but which does not give us any real theoretical leverage to explain cross-national or cross-time variance in the political cleavage structure of societies. Hypotheses of this kind are "too general to be of much help; in fact, [they] often read as description on an abstract level" (Kalyvas 1994, 13).

Ostensibly comparative studies produce similarly unhelpful hypotheses. For example, Lipset and Rokkan's (1967) work is comparative; however, their hypothesis is historically limited to the period of the national and industrial revolutions. Further, the hypothesis really consists of a series of country-specific hypotheses: they explain the dependent variable of political cleavage structure (what they call social cleavages) by historical features of the industrial and national revolutions in each country. Similarly, Inglehart (1977, 1984, 1990, 1997) explains the rise of the post-materialist cleavage by changes in the world—the post-war prosperity of advanced industrial democracies—and by generational replacement; this hypothesis, though, is limited to the specific cleavage of post-materialism. Even if we generalize his argument about generational replacement, which surely does underpin the rise and fall of many cleavages, this tells us nothing about which cleavages will be on their way in and out.

The lack of meaningful macro-level hypotheses may be traced to the inherent difficulty of predicting which and how many latent cleavages will be politicized. For example, random events play a significant role in the process (e.g., one state attacks another; the citizenry of a third state must then decide upon its response to the attack, which divides it) and contingent factors abound, as revealed by case studies. Overall, political cleavages seem to change as the world and its inhabitants change, and that is a difficult theory to get a handle on. Fearon (2002, 12) goes so far as to argue that "perhaps little can be said at a general level ... the best answers may just be historical accounts of how political identities developed and changed in particular cases".

There has been more theory-building about the macro-level conditions governing the particization of cleavages. Two independent variables are identified in the literature: the relative sizes of the groups generated by political cleavages and political institutions such as the electoral system.

First, only those cleavages generating groups that are large enough to secure victory in political competition will be particized. Przeworski and Sprague (1986), Fearon (2002), Chandra and Boulet (2003), and Posner (N.d.) offer variants of this hypothesis.[2] This

in this manner, what the thesis has called latent cleavages. Metaphorically, Posner describes these as cards that players do not hold in their hands.

[2]Posner and Chandra and Boulet argue that only cleavages that generate minimal winning coalitions will be particized. Przeworski and Sprague argue that particization of the class cleavage is ultimately constrained by the proportion of workers in a polity. More specifically, while in the short run socialist parties were constrained by the number of organized and self-aware workers (the size of the working class group generated by the politicized class cleavage), in the long run they increased the members of this group by fostering a common interest among and organizing workers, up to the maximum of the total number of

independent variable, however, is conditional upon the political institutions that govern the boundaries of the arena in which political competition occurs; it naturally leads to the second and more important independent variable, political institutions.

Political institutions shape the size of a group that is optimal for winning elections. They also establish which elections are held (if sub-national elections are held in addition to national elections and if the legislature is elected separately from the executive) and the relative importance of winning specific elections at the various levels of government (how powerful an institutional body at a level of government is compared to others). The electoral system is the political institution that sets election-specific criteria for winning. This variable has received the most attention in the literature while others, e.g. regime type and federalism or decentralization, have received less attention.[3]

While the idea that particized cleavages are endogenous to electoral systems is not controversial, specific hypotheses about the nature of the relationship are rare. Taagepera and Grofman (1985) suggest that proportional representation electoral systems will support more 'issue dimensions' than will single member plurality electoral systems. Somewhat similarly, Posner (N.d., 167–68) argues that the particization of only one cleavage in Zambia is due to the use of a single-member plurality electoral system. With district magnitude greater than one, individuals may fail to coordinate upon one political cleavage and multiple cleavages will be particized. Cantillon (2001) concludes from her model that the entry of new parties to particize a new politicized cleavage is not equilibrium behavior under a single-member plurality electoral system. Rather, existing parties either ignore the new cleavage, drop the old in favor of the new cleavage, or take positions on both cleavages depending upon the relative salience of the cleavages in the electorate. Essentially, either there is no change in the particized issue space or re-alignment of existing parties takes place, both of which leave the particized issue space effectively one-dimensional. Conversely, under proportional representation, the entry of new parties is equilibrium behavior. Although entry does not occur frequently, when it does, the particized issue space becomes two-dimensional. Hence, Cantillon's model implies a slightly different hypothesis: that multiple cleavages may be particized but will be bundled together under a single-member plurality electoral system while bundling will not necessarily occur under proportional representation. Hence, a synthesis of this literature yields the hypothesis that fewer politicized cleavages will be particized under a single-member plurality electoral system than under a proportional representation electoral system, although in Cantillon's case this is only true of the effective

workers in a polity. That is, politicization of the class cleavage had to occur in order for its particization to be successful. By extension, the class cleavage was not particized if there was not a sufficiently large number of workers in a polity (say, if the polity was primarily agricultural).

[3]Lipset and Rokkan (1967) hypothesize that institutional conditions such as the electoral system and other characteristics of the bargaining arena facing parties at the time of democratization (what they term 'thresholds') determine which politicized cleavages are particized. Lijphart (1977), Rabushka and Shepsle (1972), Inglehart (1984), Ordeshook and Shvetsova (1994), and Cantillon (2001) all argue that particized cleavages are endogenous to electoral systems. Posner (N.d.) argues that the particized cleavage in Zambia varies with the party system. During periods of one-party rule, the tribal political cleavage is particized and during multi-party rule, the linguistic political cleavage is particized. The independent variable here, though, is really democracy versus non-democracy: during periods of one-party rule in Zambia, competition for executive power at the national level does not occur so politics is purely local. Alternatively, the independent variable could be viewed as federalism, with Zambia falling on one extreme of a continuum of national (federal) government relevance. He further suggests that the number of cleavages particized relates to the electoral system.

dimensionality.

The mechanism that lays the micro-foundations for these macro-level relationships is strategic behavior on the elite and mass levels. The focus here will be on political elites for the same two reasons given in Chapter 5. In addition, a third reason for focusing on elites is that there is less theorizing about the mass behavior that aggregates to produce the cleavage structure of a polity. What little there is can be combined with theories that provide micro-foundations for other aggregate outcomes of mass behavior (e.g., electoral support for candidates). Together, these literatures suggest that individuals strategically and instrumentally choose to identify with particular groups generated by particular cleavages.[4]

At the elite level, Olson's (1965) classic analysis of the logic of collective action and complementary research by political scientists and economists into the role of the political entrepreneur provides a mechanism for the creation of political cleavages. Olson argued that the existence of a large collection of individuals with a common interest is not a sufficient condition for collective action.[5] Contrary to early group theorists such as Truman (1958), Olson believed that groups do not spontaneously emerge to provide their members with public goods. Entrepreneurs play a critical role in organizing latent groups of individuals: they develop the rewards or coercion that motivate individual participation and administer these selective incentives.[6] Additionally, although Olson's analysis presumes a common interest, this, too, must initially be cultivated. Entrepreneurs can play a role here as well. Thus, a group of individuals engaged in a political conflict with another group of individuals must possess two qualities: a common interest and an organizational structure that allows the group's interest to be expressed.[7] Entrepreneurs create groups with these qualities

[4]For example, coordination amongst voters on M+1 candidates via strategic voting underpins Duverger's law at the district level (Cox 1997). Similarly, migrants make strategic choices about language acquisition that determine the linguistic homogeneity of a polity (Laitin 1989, Laitin 1993) and individuals in post-colonial states coordinate on the medium of instruction—a vernacular or English—for their children (Laitin 1994). Finally, individuals instrumentally choose an ethnic identity, the choices of which aggregate to determine the axis of political conflict in the society (Posner N.d.).

[5]Olson's argument is that although the members of a large (latent) group have a shared interest in the provision of a collective good, free-riding by rational individuals will prevent the provision of optimal amounts unless individuals are given a selective incentive to contribute to the group's efforts. Selective incentives can either take the form of coercion or a reward targeted only at contributors. See Hardin (1982) for a good review of the collective action problem.

[6]Wagner (1966), Salisbury (1969), Frohlich and Oppenheimer (1970), Frohlich, Oppenheimer and Young (1971), and Walker (1994) developed the concept of the entrepreneur. Olson (1971, 174–78) discusses this approach and how it complements his own. Entrepreneurs or leaders have personal incentives to help organize efforts to provide a collective good. For example, Wagner argues that politicians may provide an otherwise unorganized group with rewards in exchange for votes; alternatively, patrons (e.g., government agencies) may engage in top-down mobilization to gain or expand a constituency. In small groups, the role of what is often called the 'political entrepreneur' is to suggest voluntary cost-sharing agreements or arrange bargains; in large groups, it is to create or administer selective incentives.

[7]Bartolini and Mair (1990) define social cleavages as possessing two qualities that correspond to Olson's prerequisites for collective action by large groups: a normative component of consciousness and a macro-institutional component that expresses this consciousness. However, neither they nor those who build on their approach (e.g. Kriesi 1998, Manza and Brooks 1999) explain why some social cleavages possess these qualities and others do not. This is an example of scholarship omitting a discussion of endogeneity instead of denying it. Note that Manza and Brooks's (1999) historical analysis of the evolution of four social cleavages in American politics hints at an agency-based explanation on the micro-level and a party system-based explanation at the macro-level; however, it neither fleshes out nor generalizes the argument.

around divisions, whether sociological or psychological, and hence create political cleavages. Such leaders may be from any walk of life: an aspiring politician, a current politician, or an activist. For example, politicizing the racial cleavage in the U.S. requires African and white Americans to each develop a shared set of interests as well as the organizational capacity to express those interests; in the former case, religious leaders who sponsor community-building activities and sanction individual behavior may play this entrepreneurial role.[8]

Political scientists have naturally focused on the entrepreneurial role of political actors in both politicizing and particizing cleavages. Special attention is paid to the latter here. Schattschneider (1960, 66) went so far as to argue, "the definition of the alternatives is the supreme instrument of power." In his view, politicians (specifically, political parties) exploit the cleavages that will bring them power and suppress those that will not, strategically structuring political competition around a few out of the multitude of conflicts that exist in society. Riker (1986) argued that the most common form of strategic (in his words, heresthetic) behavior by politicians is the manipulation of the dimensions underlying political competition. The introduction of a new partisan cleavage can break up a previously winning coalition and bring the heresthetician to power. Since the previously winning coalition will naturally attempt to oppose the introduction of a new cleavage, the number and nature of particized cleavages in a polity result from this ongoing strategic game. In Riker's (1986) famous example, the Republicans made the politicized issue of slavery a relevant partisan division in late 19th century America to split the Democratic party, which had tried to confine the issue to the local level in order to prevent such a split. Other scholars stake out similar theoretical positions and marshal evidence to support their hypotheses. For example, see Lipset and Rokkan (1967); Przeworski and Sprague (1986); Rosenstone and Hansen (1993); Kalyvas (1994); Laitin (1986); Chhibber and Torcal (1997); Jackman (1998); Kitschelt (2000); Cantillon (2001); Torcal and Mainwaring (2003); and van der Veen and Laitin (2004). These scholars draw similar conclusions using different methodological approaches.[9]

In sum, a substantial literature argues that strategic behavior by political actors and other entrepreneurs is responsible for the politicization of latent cleavages; similarly, strate-

[8]There is a large literature on the role of the black church in the U.S. civil rights movement. See, for example, McAdam (1982). Depending on one's perspective, the civil rights movement could be viewed as either the politicization or the particization of the racial cleavage in the U.S. The inclination here is towards the latter, following Carmines and Stimson (1989), but no doubt similar arguments could be made about the role of black churches in politicizing the cleavage as early as the late 19th and early 20th centuries.

[9]Of special interest is the seminal work of Lipset and Rokkan (1967). As Sartori (1969) argues, they devote substantial space in their essay to the question of how political cleavages are particized. The mechanism they offer is strategic behavior by political parties. With respect to the politicization of latent cleavages, however, their work is less clear. Here the account is very historical. Sociological divisions became relevant (politicized) as a result of a complex set of political choices that governed the timing and content of the national and industrial revolutions. Przeworski and Sprague's (1986) now-classic analysis of electoral socialism concludes that particization occurs as an explicit party strategy. Ultimately, their analysis shows the feedback between the political and particized issue space, though: they provide evidence that the causal arrow sometimes runs in the other direction with particization shaping politicization. Kitschelt (2000) argues that the strategies of entrepreneurs determine whether or not the new authoritarian–liberal cleavage in Europe is politicized. Likewise, the strategies of social democratic and conservative parties determine whether or not the cleavage is particized by the emergence of radical right parties. Finally, Kalyvas's (1994) study of Christian Democracy in Western Europe concludes that a politicized church-state cleavage did not necessarily lead to particization: historically, the emergence of confessional parties was an unforeseen consequence of strategic choices by political actors.

gic behavior by political actors is responsible for the particization of political cleavages.

Is the direction of causality truly from politicized to particized cleavages, as it has been presented here? It may be the case that the two stages coalesce, for example when politicians encourage the growth of group consciousness and organization while making the resulting cleavage a line of partisan division. It may also be the case that the partisan division precedes and shapes the growth of group consciousness and organization, as in Przeworski and Sprague's (1986) history of electoral socialism and as argued by Sartori (1969).[10] More often than not, it seems likely that politicians will work with existing political cleavages within the electorate to reshape the particized issue space, as expressed by Cantillon's (2001) model of issue adoption. This allows for actors not of the political class to play entrepreneurial roles in politicizing cleavages. Normatively, this position reflects a perhaps-naïve belief that the pressure for politicians to make policy comes more often than not from below: that individuals' identities and concerns as citizens are not completely political products. Ultimately, this too is in part an empirical question that careful research—most probably qualitative—can help to resolve.

6.2 The Relationship between Electoral System Restrictiveness and Dimensionality

This section briefly offers suggestive empirical evidence regarding claims that the particized ideological space will tend to be one dimensional under restrictive electoral systems and multi-dimensional under less restrictive electoral systems. To give the hypothesis the benefit of the doubt, only single member plurality electoral systems are considered restrictive. The estimates of the particized ideological space developed in Chapter 4 for twenty-four advanced industrial polities and information on electoral systems developed in Chapter 5 provide the necessary data. For the former, the estimate produced by combining the polity–time variant method of calculating salience and Molinar's NP summary measure is chosen.

For the four polities with single member plurality electoral systems, the United States, the United Kingdom, Canada, and New Zealand (until 1996), the mean estimated dimensionality is 1.61. For the other twenty polities with less restrictive electoral systems, the mean estimated dimensionality is 1.49. By this first cut analysis, the hypothesis does not seem to be supported by the data. Of course, the United States is a high outlier in the data set; the mean dimensionality of the particized ideological space for the remaining three countries with single member plurality electoral systems is only 1.40. Still, even excluding the United States does not appear to yield a significant difference.

Since the method used to estimate dimensionality in Chapter 4 cannot distinguish between overlapping and orthogonal cleavages, these results should be viewed as preliminary. The particized ideological space of the United States, for example, may actually be of much lower dimensionality than was estimated due to cleavage overlap. Nevertheless, the simple hypothesis implied by some studies that the ideological space will be of lower dimensionality under restrictive than permissive electoral systems probably needs reformulation. As Cantillon's (2001) model suggests, it is likely that effective dimensionality will be lower under

[10] Sartori (1969, 84) argues, "it is not the 'objective' class (class conditions) that creates the party, but the party that creates the 'subjective' class (class consciousness)... The party is not a 'consequence' of the class. Rather, and before, it is the class that receives its identity from the party."

the former because of restrictions on entry—few parties may address several fundamental conflicts—but that is not to say that more than one conflict cannot characterize politics in such polities. It is just that conflicts will be bundled together, which will exacerbate their severity if scholars such as Lipset (1963) are to be believed.

6.3 The Relationship between Latent and Particized Cleavages

This section explores the relationship between latent and particized cleavages. Does the salience of a particular latent cleavage predict its particized salience? For example, does ethnic group polarization, one indicator of the salience of the latent cultural–ethnic cleavage, predict the prominence of cultural–ethnic issues on the political agenda? In other words, to what extent do characteristics of society relate to the conflicts that define political competition between parties? We might view this as focusing upon another feature of party systems, the *nature of competition* as opposed to the *number of competitors*.

As Chapter 2 argued, the use of supposedly exogenous measures such as latent cleavages seem motivated by the belief that there is a reasonable correspondence between latent, political, and particized cleavages. Democratic theory makes this assumption eminently plausible. However, I am aware of no published, cross-national empirical evidence to this effect. As the prior section has argued from reviewing the literature, there are good theoretical reasons to suppose the relationship should not be too strong, particularly that between latent and particized cleavages. The empirical issue is worth investigating. Unfortunately, we can only explore the relationship between latent and particized cleavage salience due to the lack of data on political cleavages. Also of potential interest are arguments that latent sociological cleavages may be better predictors of politicized and particized sociological cleavages than latent non-sociological cleavages are of the corresponding non-sociological political and particized cleavages. Allardt and Pesonen (1967) describe corresponding latent, politicized, and particized sociological cleavages as 'structural'. This section will only briefly investigate these claims here due to space concerns.

In the analysis that follows, the relationship between latent cleavage and particized cleavage salience will be explored for five of the seven cleavages studied by the thesis: socioeconomics, culture–ethnicity, religion, urban–rural, and foreign policy.

6.3.1 Preliminaries

It is initially worth noting why the post-materialist cleavage is not featured in the analysis. The reason is straight-forward. The indicators for this cleavage developed in Chapter 4 primarily discriminate between poor, developing and rich, developed countries following Inglehart's hypothesis, and the sample used here consists entirely of the latter.

Testable Hypotheses

Accordingly, to begin, five testable hypotheses are evaluated, one per cleavage. Each of the five dependent variables is the mean particized cleavage salience in a country, the proportion of political party manifestos devoted to the cleavage averaged over time. The independent variable in each hypothesis is the corresponding latent cleavage salience in a country. Since

estimates of the latter do not vary across time, they need not be averaged. The testable hypotheses take the following straight-forward form: the latent salience of the cleavage is positively related to its particized salience. That is, the coefficient on the indicator of latent salience is estimated to be positive as well as both statistically and substantively significant.

A sixth more informal testable hypothesis is that the models for the four sociological cleavages—socioeconomics, religion, urban–rural, and culture–ethnicity—will explain a larger proportion of the variance in particized cleavage salience than will the model for the non-sociological cleavage, foreign policy.

Data

The measures of latent and particized cleavage salience developed in Chapter 4 serve as the data for the analysis. Since particized cleavage salience could only be measured for the twenty-four polities analyzed by the Manifesto Research Group, the sample is limited to these cases (see Table 4.1 for their identities). Only particized cleavage salience calculated using the polity–time variant method is utilized. However, on the latent cleavage salience front, the preferred *and* the alternative indicators of each cleavage's salience are employed as right-hand side data as part of a sensitivity analysis. List-wise deletion is again the missing data strategy, which sometimes reduces the sample by one or two cases (usually eliminating Ireland or Iceland).

6.3.2 The Analysis

The linear model estimated using OLS in `R` is simple:

$$\text{PSAL}_i = \beta_0 + \beta_1 \text{LSAL}_i + \epsilon_i \ , \tag{6.1}$$

where PSAL is the salience of one of the six particized cleavages and LSAL is the salience of the corresponding latent cleavage. Since the data is cross-sectional, cases are indexed by i.

Readers might object that estimation by OLS is not the appropriate strategy in this case. The dependent variable, a percentage, is clearly limited: values fall in the interval from zero to one, inclusive. OLS yields biased estimates if some values of the dependent variable that correspond to known values of the independent variable are not observable, what is known as a censored sample. However, since in our particular case the data set does not happen to contain dependent variable values that are actually censored (i.e., at either limit), it does not seem that estimation by OLS should be problematic.

All in all, nineteen models were fitted: seven for different indicators of latent cultural–ethnic cleavage salience; four for religious; three for urban–rural; two for foreign policy; and three for socioeconomic. The results (estimated coefficients and standard errors) are shown below in Table 6.1.

As is evident from the table, the latent salience of the cultural–ethnic cleavage is a surprisingly good predictor of its particized salience. Whether latent salience is operationalized as ethnic group polarization, ethnic group fractionalization, linguistic group polarization, or linguistic group fractionalization, using in turn different lists of groups and population sizes, the conclusion is similar. As latent salience increases, so too does the dominance of the political agenda by cultural–ethnic issues. The relationship is both statistically and substantively significant. For example, an ethnically polarized country such as Belgium is predicted

	Culture–Ethnicity						
	Ethnic Fractionalization (Alesina)	Ethnic Polarization (Alesina)	Ethnic Fractionalization (Fearon)	Ethnic Polarization (Fearon)	ELF	Linguistic Fractionalization (Alesina)	Linguistic Polarization (Alesina)
Intrcpt (Std)	6.59 (1.29)	5.73 (1.40)	6.31 (1.53)	5.12 (1.69)	6.70 (1.19)	7.05 (1.44)	5.98 (1.49)
LSAL (Std)	18.9 (4.23)	14.7 (3.15)	18.5 (4.78)	14.0 (3.42)	20.2 (4.13)	16.8 (4.69)	13.6 (3.29)
n	22	22	20	20	22	22	22
R^2	0.477	0.496	0.427	0.457	0.521	0.368	0.436
	Religion				Urban–Rural		
	Religious Fractionalization (Alesina)	Religious Polarization (Alesina)	Religious Fractionalization (Fearon)	Religious Fractionalization (Annett)	Percent Rural Population	Percent Agricultural Employment	Percent Agricultural Value
Intrcpt (Std)	1.29 (1.55)	1.68 (1.23)	1.12 (0.773)	1.08 (0.697)	3.26 (0.829)	3.41 (0.581)	2.85 (0.617)
LSAL (Std)	1.63 (0.991)	0.581 (1.97)	2.43 (1.68)	2.72 (1.67)	1.98 (2.74)	4.86 (5.71)	19.4 (9.47)
n	22	22	20	22	22	22	21
R^2	0.0427	0.0874	0.0951	0.108	0.0232	0.0318	0.167
	Foreign Policy		Socioeconomics				
	Percent War (Correlates)	Percent War (Alvarez)	Gini Coefficient	Percent Income Held, Top 20 Percent	Percent Income Held, Bottom 20 Percent		
Intrcpt (Std)	11.1 (1.62)	10.8 (1.71)	49.7 (9.25)	60.4 (16.9)	35.0 (7.75)		
LSAL (Std)	32.4 (24.2)	17.2 (12.2)	−22.6 (28.7)	−45.1 (41.8)	94.9 (101.2)		
n	22	22	22	21	21		
R^2	0.0755	0.0835	0.0275	0.0525	0.0402		

Table 6.1: Coefficient estimates and standard errors for nineteen models represented by equation 6.1, the relationship between latent and particized cleavage salience for five cleavages and various operationalization of latent cleavage salience.

to have roughly 13% more of its parties' manifestos devoted to cultural–ethnic issues than an ethnically unpolarized country such as Austria. Moreover, between thirty-seven and fifty-two percent of the variance in the percentage of manifestos devoted to cultural–ethnic issues is explained by the ethnic, cultural, and linguistic characteristics of societies.

Weaker but similar results obtain for the latent salience of the other four cleavages. Only one indicator obtains statistical significance at conventional levels, but several others come close.

Regarding the latter, religious fractionalization indicators based on Fearon and Laitin's (2003*b*) and Annett's (2001) data are significant at the 0.10 level for the one-sided tests. However, the proportion of total variance explained by these operationalizations of latent religious cleavage salience is much lower than the proportion explained by the indicators of latent cultural–ethnic cleavage salience, if still respectable. Further, one cannot help but wonder why results are substantially weaker with Alesina et al.'s (2003) list of religious groups and population shares. Also significant at the 0.10 level for the one-sided test are the two operationalizations of latent foreign policy salience. The total variance they explain is less than either the religious or ethnic indicators, but we should be gratified that these indicators performed as well as they did given their admitted flaws. (Recall Chapter 4's discussion of the limited role played by military entanglements in pushing foreign policy issues to the top of the political agenda: other important issues such as EU membership have little to do with military matters.)

Regarding the former, the biggest surprise of them all is that the relationship between agricultural value added as a percentage of gross domestic product and the particized salience of urban–rural issues is statistically significant at conventional levels. This was not our preferred indicator of the latent salience of the urban–rural cleavage, yet its relationship to the dependent variable is the strongest of the three competitors. The proportion of total variance it explains is also respectable. For both rural population and agricultural employment, the estimated coefficients have the correct signs but are not significant at close to conventional levels. (The p-values are not unreasonable, though: roughly 0.20 for the one-sided tests.)

The relationships between the indicators of latent socioeconomic salience and particized socioeconomic salience are the least strong of them all, save for the relationship between the two indicators of latent religious salience based on Alesina et al.'s (2003) data and particized religious salience. In fact, the estimated coefficients in the socioeconomic models have the wrong sign. For example, instead of an increase in economic inequality being associated with an increase in the salience of socioeconomic issues, the opposite is the case. Perhaps our ideas about this cleavage were mistaken. It might be the case that a vestige of old socioeconomic struggles still lingers in today's egalitarian welfare states, the countries that enacted then-radical social policies around the turn of the century in response to the formation of cross-class alliances at key historical junctures. It might also be the case that political elites in less egalitarian countries such as the United States have kept redistributive issues off of the table. For this, the most important of the cleavages, the stakes may be so high as to have led elites to an implicit economic consociationalism. Although the cases in this empirical analysis are all advanced industrial democracies, the latter hypothesis seems even more plausible for developing countries with highly skewed income distributions such as Mexico. Empirical confirmation of this hypothesis must await the content analysis of political party manifestos by the Comparative Manifestos Group in developing countries,

though.

Overall, the results are striking, particularly in light of the small sample size. While it is certainly true that there is a far from perfect relationship between the latent salience of the five cleavages and the dominance of the political agenda by the corresponding issues, the relationship is generally both statistically and substantively significant. In fact, we did not expect to find as strong of a relationship as we did with respect to the cultural–ethnic cleavage, given the strategic and contextual nature of cleavage politicization and particization discussed in a previous section. This aside, the empirical evidence supports the conclusion that characteristics of societies such as their propensity to become involved in military conflicts and the relative sizes of their constituent ethnic groups do relate to the types of issues that feature in political debates.

A few caveats are in order here. First, the relative strength of the relationship between the latent and particized salience of the cultural–ethnic cleavage may be explained by the fact that measures of ethnicity can never truly be latent. As Chapter 2 discussed, it is practically impossible to identify latent ethnic (or religious) groups: the groups that appear in scholars' lists are often in fact politicized. Since a stronger association is expected between political and particized cleavages than between latent and particized cleavages, if the indicators of the cultural–ethnic conflict are in fact tapping a politicized instead of a latent cleavage, the strength of the observed relationship comes as no surprise. The measures of the latent urban–rural, socioeconomic, and foreign policy cleavages, based as they are on more 'objective' data such as income and place of residence, should be less contaminated. Why cultural–ethnic characteristics of society are stronger predictors of the cultural–ethnic dominance of the political agenda than are religious characteristics of religious dominance, though, is not clear. The best explanation may simply be the decline of religion in the Western world over the last half of the twentieth century, although less valid measures of the relevant religious groups and their population sizes may also be a contributing factor.

Second, nothing can be conclusively said about causality on the basis of this analysis. One might plausibly argue that the causal arrow runs in the other direction, from the political agenda to the characteristics of society. For example, it is not inconceivable that political parties drum up support for wars where neither public support nor external justification exists for them, launching attacks after their rhetoric has laid the necessary groundwork. Contrast this position with the alternative, that the unique political and economic circumstances of a polity draw it into international conflicts, its response to which then becomes a subject of political debate. The previous sort of argument quickly becomes carried away. Surely we do not think that political parties completely manipulate the reality we experience. While it is undoubtedly true that the causal arrow does run both ways at times, as argued in a prior section of this chapter, it seems implausible (or at least Orwellian) to suggest that the best explanation points the arrow from politics to society.

Finally, with respect to the sixth testable hypothesis, the relationship between latent and particized cleavage salience seems stronger for the four sociological cleavages than for the non-sociological cleavage. However, if we leave the cultural–ethnic cleavage out of the picture, the distinction is no longer very stark. There seems to be some empirical support for the notion that sociological cleavages are more likely to be structural than non-sociological ones, but the evidence is not compelling.

6.4 Conclusion

Political entrepreneurs both politicize and particize cleavages strategically. Whether driven by concerns of policy or of office, some mold the groups to which political parties, with other entrepreneurs at their helms, ultimately respond. Sometimes the two processes happen simultaneously; sometimes they are divorced, with parties taking their (strategically-timed) cues from the public as democratic theory holds they should; it is also undoubtedly true that sometimes entrepreneur-led political parties shape groups. Regardless, this chapter has synthesized a large body of literature in comparative politics to argue that strategic behavior by entrepreneurs is the micro-level force driving the politicization and particization of cleavages. The notion of societal determinism—that 'social cleavages' are objectively and automatically translated into politicized and particized cleavages—should be laid to rest once and for all.

The chapter further argued that the strategic incentives to which entrepreneurs respond are established by political institutions. At the macro-level, electoral systems, federalism, and other features of political regimes structure the costs and benefits associated with politicizing and particizing particular groups and cleavages. Specifically, institutions determine which cleavages yield viable political coalitions: the minimum size principle initially discussed in the previous chapter. However, it is difficult to derive good macro-level hypotheses that explain cleavage politicization because contextual and contingent factors play such a large role in the process. Matters are clearer with respect to cleavage particization, where restrictive electoral systems are hypothesized to constrain the emergence of new cleavages. Empirical support for this proposition, though, is not strong for the sample of twenty-four advanced industrial democracies studied. A more sound hypothesis does not predict that only one line of conflict will dominate political debate under restrictive electoral systems; rather, it predicts that multiple conflicts will likely be bundled together under restrictive electoral systems (*effective* one dimensional competition), which will not necessarily be the case under permissive electoral systems.

But entrepreneurs do not shape political and particized cleavages out of thin air. They work with facts on the ground: with characteristics of the societies in which they operate. From this perspective, the latent (or political) and the particized cleavage structures will relate. Democratic theory, in fact, holds that the types of issues that dominate the political agenda should be influenced by society. Exceptions to this rule include severely divided societies, where consociationalism instead keeps issues off of the agenda in order to make democracy work. Even leaving aside consociationalism, however, while there should be a relationship between latent and particized or political and particized cleavage salience, it should be far from perfect for all of the reasons discussed above.

This hypothesis is supported by the empirical evidence. The percentage of political party manifestos devoted to each of five cleavages, from culture–ethnicity to foreign policy, the measure of particized cleavage salience developed in Chapter 4, is positively related to corresponding indicators of latent cleavage salience for all of the cleavages except for socioeconomics. Ethnic and linguistic fractionalization or polarization has a particularly strong impact on the extent to which cultural–ethnic issues dominate the political agenda. However, the percentage of the total variance in particized cleavage salience explained by the salience of the corresponding latent cleavage does not exceed roughly fifty percent, which leaves plenty of room for context and strategic behavior to play their parts.

All in all, naive democratic theory seems to be working pretty well. More sophisticated versions of democratic theory are also in reasonable health but puzzling issues remain. Although what follows is all highly speculative, it is not implausible to explain the empirical results for the socioeconomic cleavage with pacts that keep socioeconomic issues sidelined in economically plural (highly unequal) countries. Why consociationalism seems to be driving particization on a cleavage-wide level (or more accurately, to be *not* driving it) only for the socioeconomic cleavage is an intriguing question that future research should address, particularly in light of the fact that consociationalism was originally developed to explain the sustainability of democracy in culturally plural societies. Similarly, why consociationalism is practiced in some countries and times but not others, and how well this strategy actually works relative to a naive democratic strategy in terms of outcomes such citizen satisfaction and domestic stability, are questions left to future research.

The strength of the empirical relationships between latent and particized cleavage salience is surprising but gratifying. This evidence suggests that the conventional focus in comparative politics on relating so-called social cleavages to the number of political parties competing in elections may be misguided. Perhaps a more productive line of inquiry would be to to focus on their relationship to the nature of political competition: i.e., to the sets of issues that are on the political agenda. From here, a myriad of interesting questions about the linkage between the political agenda, public policies, and substantive outcomes become ripe for investigation.

Chapter 7

Conclusion

Political institutions and preferences interact to produce outcomes. While some new institutionalists would like to write preferences out of the fundamental equation of politics, most recognize that political institutions on their own can provide us with only a partial understanding of the political world. But how do we think about preferences, the societal inputs to the political process? Comparative politics has made great strides in exploring cross-national variance in political institutions and in linking this variance to consequential outcomes. However, similar strides have not been made with respect to societal inputs. The ways in which countries differ in the substance of their political debates is not well understood. While area specialists revel in these types of differences, comparativists do not have a handle on systematic variation in the 'what' part of Lasswell's description of the political process, that politics is about 'who gets what, when, how'. Moreover, there is neither theoretical nor empirical consensus about how this variation affects outcomes such as the party system and, further down the road, public policy, other than a belief that preferences do matter—somehow.

This thesis first and foremost has tried to breathe new life into the study of this variable, what the literature has called social cleavages or ideological dimensions. To do so, it suggests a return to the conceptual drawing board. The abstract concept of societal inputs, the 'big picture' variable, needs to be broken down into tractable components that have real world correlates. These components may be viewed as defined primarily by their stage in the process of issue evolution: where the conflicts within society—the types of issues that inform debate and the positions actors take on these issues—stand relative to the political process. What the thesis has called latent cleavages are features of society that are for the most part exogenous to the political process, such as the distribution of a country's population over rural and urban areas and its racial composition. These latent cleavages should be distinguished from political cleavages, latent cleavages that have been activated or made salient within the citizenry. Political cleavages divide members of the society, who recognize a shared identity with a group of other members and who have developed organizations that allow for the expression of the interests stemming from the shared identity. Here we might think of ethnic groups, foreign policy hawks and doves, and the religious and non-religious. Comparativists often overlook this distinction at inconvenient moments (the term 'social cleavages' is used at times to refer to both types of inputs) despite the fact that it can be quite consequential, both theoretically and empirically. The final step in the process of issue evolution is taken when politicized conflicts within society are actually picked up by

political parties and placed on the political agenda. These particized cleavages or 'ideological dimensions' divide political elites, such as the conflict between economically interventionist and economically free market parties. They represent the penultimate societal input into the political process. While there are other routes for conflicts within society to affect public policy, legislative and executive decision-making by political parties is the policy-making super-highway of the political world.

With these distinctions in mind, it is possible to empirically explore cross-national variation in societal conflicts. What *do* people want from politics? And does it differ across space and time? While comparativists are implicitly aware that there is variation, little valid cross-national data actually exists on the matter, particularly data that is suitable for quantitative analyses. First, with respect to latent cleavages, empiricists have proceeded almost exclusively with respect to one type of conflict: ethnic. Ignoring other features of society that might give rise to important foreign policy, socioeconomic, or religious conflicts renders existing measures invalid and invites bias into empirical results. It also must be noted that a host of measurement problems plague this variable, as constructivists have pointed out the difficulty in actually measuring latent as opposed to politicized divisions. Second, with respect to political cleavages, the standard approach applies data reduction techniques to public opinion surveys to elicit the political cleavage structure. However, here, too, important cleavages such as foreign policy are neglected as they do not feature in survey instruments, resulting in invalid measures. Moreover, of the few large-N cross-national studies that exist, most seek to identify cross-national commonalities, not differences, which is only half of the battle. Finally, with respect to particized cleavages, data reduction techniques have also been employed to produce empirical data. Some have turned to opinion surveys of political elites and others to the Comparative Manifestos Project's data on political party manifestos in advanced industrial democracies. The problem with the resulting measures is either the same neglect of important divisions in the surveys or uninterpretable dimensions (as well as nonsensical results, such as dimensionality that ranges from three to ten or fifteen), or both. Expert judgments have produced the most widely used measure, but these are unreliable and hence invalid, as well as suffering from coding bias. Other approaches include expert surveys and the construction of indices using the Comparative Manifestos Project data, which have both unfortunately primarily focused on the left–right socioeconomic cleavage to the exclusion of others. In short, the data that we need to have does not exist.

The thesis attempts to fill these qualitative and quantitative empirical gaps, arguably one of its most important contributions to comparative politics. Without cross-national empirical data on the fundamental conflicts that have riven democracies, we can neither assess the veracity of assumptions made by spatial and formal theory nor test hypothesized relationships between this variable and various outcomes. Accordingly, it identifies seven cleavages that the comparative politics field has traditionally viewed as important, ranging from socioeconomics to foreign policy. It then develops indicators of the latent potential for conflict around these cleavages for all post-war democracies and combines the indicators in a variety of ways to measure the latent diversity of a country (an additive index is the simplest and preferred method). Using the Comparative Manifestos Project data on twenty-four advanced industrial democracies, it turns to the political agenda itself. By making the assumption that the more space political parties devote to the issues related to a particular cleavage in their manifestos, the more salient that cleavage is in that country

and time period, cross-sectional time series estimates of the salience of the seven cleavages are constructed. These estimates are then used to construct estimates of the dimensionality of the ideological space in which political competition occurs from the perspective of political parties. Unfortunately, new survey instruments need to be developed and administered cross-nationally before progress can be made on the final front, the generation of data on political cleavages. This is an avenue that future research should assign high priority to exploring. Alternative approaches include the analysis of roll call votes or simply abandoning the large-N cross-national enterprise. Regarding the latter, comparable national survey instruments may exist that would enable the systematic comparison of the political cleavage structures of a smaller number of countries, although this work would have to be undertaken with great care to ensure the validity of the resulting measurements.

What this data on the latent and particized cleavage structures reveals is that there is cross-national variation in these two components of the broader abstract concept. Like political institutions, the societal inputs into the political process vary. Exogenous features of society that we think should predict the likelihood of actual conflict erupting around particular types of issues are not identical from country to country. Some countries are religiously diverse while others are religiously homogeneous; some countries have relatively large agricultural populations while others' populations are primarily urban; and some countries have an egalitarian distribution of income while others are characterized by substantial inequality, and so on and so forth. Similarly, what is on the political agenda—the types of issues that feature in political parties' debates—varies from country to country. In all of the advanced industrial democracies studied, socioeconomic issues dominate the political agenda. This evidence provides support for the conventional wisdom that socioeconomics is the most important conflict in the modern world. However, in some countries, political elites fight secondary and tertiary battles over other types of issues, most prominently issues that relate to cultural or ethnic and foreign policy conflicts. Interesting cross-time dynamics are also revealed by the data, as the preeminence of socioeconomic conflict at the elite level has declined over the post-war period. From one perspective, these findings are not surprising. Any comparativist will rightfully claim that we have known about this variance all along. From another perspective, though, they are. We have not previously been able to make our intuitions systematic, which has led both theory and empirical model building to largely proceed by ignoring the collective intuition. The magnitude of the variance revealed suggests that greater attention should be paid to what we have always known.

The key conclusion that can be taken away from this data is that one-dimensional representations of societal conflict do not suffice. Studies that attempt to relate latent cleavages to outcomes and only examine the ethnic structure of societies are committing a grave error when they generalize beyond the specific latent cleavage actually employed in their empirical models. Relatedly, the common assumption in spatial theory that both voters and elites (political parties) are arranged along a left–right political continuum, an assumption that has gradually disseminated throughout empirical comparative politics, deserves re-evaluation. The political agenda is only *frequently* dominated by one conflict, the socioeconomic, across space and time—not always. Even if Friedman is correct in arguing that it is the accuracy of the predictions, not the assumptions, that counts, these results suggest that it may be fruitful to explore the correlation of prediction error with the existence of secondary or tertiary conflicts. Perhaps it is for precisely the countries and time periods where our assumptions are not accurate that our models fail. We should also not forget that

Friedman's position is a controversial one. All else being equal, it is surely better to make plausible assumptions than implausible ones. What the thesis has both conceptually and empirically tried to demonstrate is that the assumption of one-dimensional societal conflict is not tenable.

One caveat about these results is that the methodology developed by the thesis to measure the cleavage structure of societies cannot discriminate between orthogonal and reasonably correlated dimensions. Countries with multiple salient cleavages may in fact be of lower dimensionality than estimated because two or more of the cleavages identified as salient overlap. This is a thorny empirical issue that may be ultimately intractable, as Rae and Taylor (1970) noted long ago. Here, too, progress may be made either by moving away from a large-N research design or—at the elite level—by supplementing it with an analysis of political elite survey data. At minimum, to reduce the cost of the enterprise, such a survey could be administered in a few of the countries that appear multidimensional. Data reduction techniques could then be applied to the survey data to elicit dimensionality and the results compared with those reported here. But acknowledging that dimensionality may be overestimated for some countries does not negate the fact that more types of conflict are relevant than conventional approaches allow, even if they become bundled together with others. It is also worth noting that the socioeconomic cleavage may be unduly privileged relative to the others in the estimates of particized cleavage salience developed here. This cleavage's apparent dominance may to some degree be an artifact of the Comparative Manifesto Project's coding methodology, which emphasizes it. Similarly, the methodology developed in Chapter 4 privileges some cleavages such as the cultural–ethnic relative to others such as the religious, to give one example, due to the way in which the CMP's coding categories are constructed.

Where do we go from here? One road traveled by the thesis is well-trod. The vast literature in comparative politics concerned with electoral and party systems argues that societal inputs into the political process help to explain the number of competitors in elections. Whether these competitors are political parties in legislative elections or candidates in separately-elected executive elections, the argument in its most general form is that the more conflicts within society, the more competitors. Some have defined their right-hand side variable as latent cleavages (usually under the moniker 'social cleavages') and others as particized cleavages (usually under the moniker 'issue dimensions'). Regardless, empirical tests of these theoretical hypotheses are deeply flawed, as invalid measures of the abstract concepts of interest—the only measures that have existed, as discussed above—have been utilized across the board, amongst other methodological failings. An illustration of these flaws is the sensitivity of the widely-known Amorim Neto and Cox (1997) model to the operationalization of latent diversity employed on the right-hand side. Another is the failure of models with the number of particized cleavages on the right-hand side to confront the endogeneity of this variable.

The thesis extends these existing linear and demand-side driven theoretical hypotheses and empirically tests the extensions using new time-series cross-sectional data sets. Theoretically, it argues that the relationship between the number of competitors and latent, political, and particized diversity should be properly viewed as non-linear. Further, it argues that the real micro-level driving force of the macro-level results is strategic behavior by political entrepreneurs, a supply-side argument. Turning to empirical matters, it employs its more valid measures of latent and particized diversity on the right-hand sides of mod-

els for both legislative and separately-elected executive elections. It also carefully explores model specification issues. The methodological conclusions it draws from the empirical analysis are twofold. First, it finds that results are sensitive to model specification. Second, it argues that the conventional approach to time series cross-sectional data in comparative politics, the Beck and Katz (1995) strategy of estimation via OLS and correction of the asymptotic variance-covariance matrix, is not appropriate in this context. Instead, random effects and autocorrelated random effects models are employed. On the substantive front, the results are weaker than expected. The data suggestively but not statistically support the hypothesized non-linear relationships, although it should be noted that there is not statistical support for the existence of *any* relationship at all. It also should be noted that the non-linear relationship is much weaker for the model with the number of ideological dimensions on the right-hand side than for the model with the index of latent diversity on the right-hand side. However, all in all, the more complex models proposed by the thesis slightly outperform their existing linear competitors. Yet what is effectively a set of null findings is certain to sit uneasily with many comparativists. These results challenge the established wisdom that society influences the party system in democracies, at least when the party system is defined as is the literature's wont as the number of competitors. The null findings may be driven in part by the use of aggregate instead of district level data. The inclusion of unconsolidated democracies alongside consolidated ones and of elections held under new electoral systems alongside those held under old ones many also be partly to blame. The theoretical arguments are fundamentally arguments about equilibrium behavior, and it is not clear (but unlikely) that the hypothesized relationships should hold for elections that take place in unconsolidated democracies or under new electoral systems where equilibria have not been attained.

A brief digression into a few methodological and research design issues seems appropriate before closing the book on these results. One such issue is statistical inference. The analysis and discussion throughout the thesis has until now proceeded as if the observations in the various empirical analyses constituted a probability (e.g., simple random) sample from a population and the goal was to make inferences from the sample to the population. This assumption has supported the consideration of random effects as a viable model in Chapter 5 and the discussion of the statistical significance of covariates (and marginal effects) in Chapters 3, 5, and 6. But is this commonly-made assumption in comparative politics a valid one in this case? It must be admitted that it is not. The sample in fact constitutes the population of all democratic elections in the period from 1945 to roughly 2000. There is neither sampling nor a sampling model. Western and Jackman (1994) describe this type of data as 'non-stochastic'. Engaging in statistical inference when the data is non-stochastic leaves us with serious interpretative problems, such as how we answer the question "probability of what?" (Berk 2004, 42). Several strategies are typically employed by social scientists when they are confronted with non-stochastic data but are unwilling to abandon the inferential enterprise entirely. One is to invent an imaginary population. This is a thought experiment of hypothetical replications, which might take on a counterfactual flavor in the form of 're-running' the world. Another is to simply proceed as if the data was generated by random sampling from a population. A third, suggested by Western and Jackman (1994), is to employ a Bayesian instead of a frequentist model of statistical inference. Unfortunately, though, what we have in either of the first two approaches is a linear-in-variables model sitting on top of a false sampling model, which requires us to make

a "leap of faith" (de Leeuw 2004, xiv). In the second, we must feel comfortable with the Bayesian approach, which many famous statisticians such as Fisher—let alone many social scientists—do not: analyses driven partly by a researcher's subjective beliefs do not seem like good science.

For the record, let it be said here that the thesis remains deeply ambivalent about the use of statistical inference in contexts such as these, although it is sympathetic to the proposed counterfactual 'many worlds' and Bayesian solutions. While the approach taken here represents a surrender to the dominant inferential dogma within the field of comparative politics, readers are encouraged to re-consider the utility of reporting and caring about statistical significance when there is no probability sampling mechanism generating the data. With non-stochastic data, if we are unwilling to go Bayesian, it is better to view regression analyses and other statistical techniques as descriptive and data reductive, as Berk (2004) has argued. We can provide descriptions of patterns in a data set and use those descriptions to make predictions, simplifying the complexity in the world as social science aims to do. However, we are not justified in drawing statistical inferences. Barring an unlikely mass conversion at the Bayesian alter, comparative politics and other branches of political science will eventually have to confront this fact as a discipline.

Another methodological issue is the difficulty in drawing causal inferences when using a research design like this one. Coefficients in regression models are commonly interpreted by political scientists as estimates of causal effects, as they have been here. They indicate by how much the dependent variable is expected to increase or decrease under a hypothetical intervention in which the value of the independent variable is changed by one unit while all other variables are held constant (Winship and Sobel 2001). However, the fundamental problem of inferring causality from non-experimental data is well-known to statisticians and philosophers. In this context, for example, the assumption of manipulability is unrealistic. There is no true intervention over which we as analysts have control: the research design is observational. Further, we cannot manipulate causes one at a time, i.e. independently. As Berk (2004, 102) argues, linear regression may sometimes be used to estimate causal effects, but it can neither be used to define nor to infer them: the data itself does not contain the necessary information. Estimation of causal effects using linear regression is only possible "once a definition and supporting rationale have been provided." This definition and supporting rationale have not in fact been provided, which leaves us unable to estimate the causal inferences we would like to estimate using the tool of regression analysis. Moreover, we are unable to speak definitively about causality using *any* tool given this research design and data.

Matching methods are one alternative to standard regression analysis that future research might want to pursue to address questions of causality. Their approach to achieving comparability may be more plausible than the covariance adjustments of multivariate linear regression. Another alternative is to decide that our goal may not be causal explanation. We might merely wish to guide policy-makers engaged in constitutional design by *describing* patterns in how the number of competitors in elections varies with the latent or particized diversity of countries. Without making causal claims, we might predict the likely effects of various reforms to political institutions such as electoral systems or the impact of large-scale changes in society. In this case, regression analysis can yield useful descriptions, informed by causal speculations in the comparative politics literature and later potentially combined with experimental or quasi-experimental research to enable the drawing of causal inferences

with greater confidence, as Berk (2004) suggests.

In closing, it is time to leave these methodological issues for future work and the discipline as a whole and to return to the big picture. The final road taken by the thesis is normative if short. A natural question that arises is what all of this says about democratic theory. One normative perspective views democracy as a desirable system of government because it does a better job of representing citizens' interests than all other contenders. From this perspective, an important component of the process of representation is the responsiveness of political parties to public opinion. Parties matter because they control the political agenda, the final stage of societal input into the policy-making process. To the extent that parties put the issues that citizens care about on the political agenda and the political agenda subsequently drives the production of public policy, democracy is working as we believe it should. The focus on linking social diversity—the number of latent, political, or particized cleavages in a country—to the number of electoral competitors in comparative politics seems motivated by concerns about this process of democratic representation. The proportional or consensual ideal holds that social groups are better represented when there are more parties, while the majoritarian ideal arguably trades off representation for efficiency. The problem with this approach is that the link between the number of parties and the quality of representation is not fully explored. Further, if we remain wedded to it for normative reasons, then the close-to-null findings of this thesis regarding the link between conflicts in society and the number of parties is a severe blow.

A related normative evaluation of liberal democracy compares the closeness of political parties, governments, and public policy to the median voter under different political institutional and party system configurations. Here, the problem is that the strength of this approach as a normative criterion is both theoretically and empirically predicated upon the assumption that parties and voters reside in the same one dimensional ideological space. Arguments and evidence developed in the thesis work against this assumption. Political entrepreneurs, through the political parties that they control, strategically choose either to pick up or to suppress cleavages that are salient amongst the citizenry at large. While the correspondence between the median voter and parties with respect to the cleavages that are salient to both citizens and political elites is an important normative issue, it misses the crucial comparison between the comprehensive ideological spaces of the two groups. An example may make the point more clearly. Say that parties are doing a good job of representation, as measured by the median voter criterion, along one dimension of political competition that is salient to both political elites and citizens. However, say that citizens care equally (or even somewhat less) about a second set of issues that for whatever reason is not salient to political elites. Since these issues do not feature on the political agenda, they do not turn up as public policy. Do we really want to conclude that all is well with democracy in this hypothetical state? Probably not, but we might if we were simply employing the one dimensional median voter criterion.

The solution is to initially compare the salience of cleavages to citizens with the salience of cleavages to political elites, and then to proceed to worry about the median voter criterion along the various cleavages. This approach sidesteps the problems with both alternative approaches. Shifting focus from the number of competitors to the terms of the political debate in this manner is also one of the major contributions of the thesis to comparative politics. Unfortunately, we do not have a cross-national measure of the salience of political cleavages, which we would ideally like to compare with the salience of particized cleavages.

The next best solution is to compare the salience of latent and particized cleavages: do the conflicts that we predict between citizens on the basis of exogenous features of their societies relate to the conflicts that appear on the political agenda? Happily, there seems to be a reasonable correspondence between the two in the twenty-four advanced democracies for which the thesis developed measures of particized cleavage salience. When averaging over the post-war period, as the latent salience of the urban–rural, cultural–ethnic, religious, and foreign policy cleavages increases, so too does the particized salience. In other words, as the power of the agricultural sector (measured in share of population or GDP) increases, urban–rural issues feature more prominently on the political agenda. Similarly, as either ethnic polarization or fractionalization increases, so too does the time political parties spend discussing cultural–ethnic issues. The one exception to this pattern is the socioeconomic cleavage, for which the direction of the relationship is reversed. As its latent salience (measured by income inequality) increases, the dominance of socioeconomic issues on the political agenda declines.

There is of course much variation from country to country around the trend lines: certain cleavages are more salient to elites in some countries than we would predict based on features of their society while others are less salient. At a general level, we can explain this variation by the strategic behavior of political entrepreneurs. What the literature has traditionally called social cleavages are not deterministically translated into divisions between political parties. Exploring this variation more fully is a task for future research. So, too, is accounting for the success of political elites in keeping socioeconomic issues off of the political agenda in relatively inegalitarian societies. Consociational pacts may be one explanation, but such an argument begs the question of why consociationalism is operating in this ideological realm but not in others. How well consociationalism really works relative to conventional political representation in different ideological realms is another open empirical question. Is democratic stability improved when certain types of issues are kept off of the agenda? Are citizens happier or better off? Now that we have data on the correspondence between the substance of political debate and conflicts within society-at-large, these and many related questions become productive lines of inquiry for future work.

Latent and politicized conflicts within society, two components of the broad abstract concept of interest, preferences, are not strongly related to the number of competitors in democratic electoral contests. However, they do shape the content of the political agenda largely as democratic theory predicts. It indeed seems that both preferences and institutions account for outcomes that comparative politics cares about.

Part IV

Appendix

Appendix A

Data for Chapter 3

The data set is a tab delimited text file labeled `C3.txt` on the accompanying CD-ROM. It is also available upon request from the author. Rows represent country–elections and columns the variables described below. Missing data is denoted "NA".

A.1 Variables

All variable operationalizations and data are from Cox (1997) with the exception of eight of the nine operationalizations of the latent preference diversity variable (ETH in the text, eth1 through eth9 in the data set). The operationalizations and sources for this variable are described below.

Abbreviation	**Name**	**Details and Sources**
cntry	Country abbreviation	
epsf	Electoral party system fractionalization, legislative election	Cox (1997)
lml	Logged median lower tier legislative district magnitude	Natural log; Cox (1997)
eth1	Ethnic fractionalization	Ethno-linguistic fractionalization (ELF) index from Cox (1997)
eth2	Ethnic fractionalization	Fractionalization summary measure applied to ethnic group and population share data from Alesina et al. (2003)

continued from previous page

Abbreviation	Name	Details and Sources
eth3	Ethnic fractionalization	Fractionalization summary measure applied to ethnic group and population share data from Fearon (2002)
eth4	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Alesina et al. (2003) with the exception of Israel (see Chapter 3, footnote 26)
eth5	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Annett (2001) with the exception of Israel (see Chapter 3, footnote 26)
eth6	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Fearon and Laitin (2003*b*) with the exception of Israel (see Chapter 3, footnote 26)
eth7	Linguistic fractionalization	Fractionalization summary measure applied to linguistic group and population share data from Alesina et al. (2003) with the exception of the Netherlands (see Chapter 3, footnote 27)
eth8	Religious polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to religious group and population share data from Alesina et al. (2003)

continued from previous page

Abbreviation	**Name**	**Details and Sources**
eth9	Additive ethnic and religious fractionalization index	Sum of fractionalization summary measure applied to ethnic group and population share data from Fearon (2002) and fractionalization summary measure applied to religious group and population share data from Alesina et al. (2003); ethnic group and population share data from Alesina et al. (2003) used for cases not included in Fearon (2002)
up	Percentage of legislative seats allocated in an upper tier	Cox (1997)
prox	Time to closest presidential election	Cox (1997)
enpres	Effective number of presidential candidates	Cox (1997)

Both the dependent variable (ENPV in the text, here epsf) and the independent variable ETH are initially operationalized in Chapter 3 using the effective number instead of the fractionalization summary measure, as discussed in the text. (Results from the estimation of the effective number models are reported in Tables 3.5 and 3.6. Results from the estimation of the fractionalization models are reported in Tables 3.7 and 3.8.) Similarly, both variables are also sometimes operationalized using the log effective number instead of the effective number; these results are discussed in the text but not reported. Both of these alternative operationalizations are easily obtained from the data supplied: in the latter case, by taking the natural log of the effective number and in the former case, by using the algebraic relationship $N = \frac{1}{1-F}$.

A.2 Cases

Cases are an election from the 1980s in each of 51 democracies without fused electoral systems. The specific election was selected by Cox (1997). The data is thus cross-sectional in structure. The countries and their abbreviations in the data set follow alphabetically by country name.

Country Name	**Abbreviation**
Argentina	Argentina
Australia	Australia
Austria	Austria
Bahamas	Bahamas
Barbados	Barbados
Belgium	Belgium
Belize	Belize
Botswana	Botswana
Brazil	Brazil
Canada	Canada
Colombia	Colombia
Costa Rica	CostaRica
Cyprus	Cyprus
Czech Republic	Czech
Denmark	Denmark
Dominica	Dominica
Dominican Republic	DominicanRep
Ecuador	Ecuador
El Salvador	ElSalvador
Finland	Finland
France	France
Germany	Germany
Greece	Greece
Grenada	Grenada
Iceland	Iceland
India	India
Ireland	Ireland
Israel	Israel
Italy	Italy

continued from previous page

Country Name	**Abbreviation**
Jamaica	Jamaica
Japan	Japan
Liechtenstein	Liechtenstein
Luxembourg	Luxembourg
Malta	Malta
Mauritius	Mauritius
Netherlands	Netherlands
New Zealand	NZ
Norway	Norway
Peru	Peru
Portugal	Portugal
St. Kitts	StKitts
St. Lucia	StLucia
St. Vincent and the Grenadines	StVincent
South Korea	SouthKorea
Spain	Spain
Sweden	Sweden
Switzerland	Switzerland
Trinidad & Tobago	Trinidad
United Kingdom	UK
United States	US
Venezuela	Venezuela

Appendix B

Data for Chapter 4

The output of Chapter 4 consists of three data sets. The first contains cross-sectional data on latent cleavage salience and dimensionality; the second contains cross-sectional time series data on particized cleavage salience and dimensionality; and the third contains cross-sectional data on particized cleavage salience and dimensionality (country averages over the post-war period of most of the second data set). The names of the tab delimited text files on the accompanying CD-ROM are `C4_latent.txt`, `C4_part.txt`, and `C4_part_mean.txt`, respectively. All three data sets are also available upon request from the author. The variables and cases in each data set are described in turn. When sources are not provided, the data is original. Missing data is denoted by "NA".

B.1 Variables

`C4_latent.txt`

Abbreviation	**Name**	**Details and Sources**
cntry	Country abbreviation	
eth_elf_f	Ethnic fractionalization	Ethno-linguistic fractionalization (ELF) index from Fearon (2002), supplemented by data from Roeder (2001)
eth_ale_f	Ethnic fractionalization	Fractionalization summary measure applied to ethnic group and population share data from Alesina et al. (2003)

continued from previous page

Abbreviation	**Name**	**Details and Sources**
eth_ale_pol	Ethnic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to ethnic group and population share data from Alesina et al. (2003)
eth_fea_f	Ethnic fractionalization	Fractionalization summary measure applied to ethnic group and population share data from Fearon (2002)
eth_fea_pol	Ethnic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to ethnic group and population share data from Fearon (2002)
eth_lin_f	Linguistic fractionalization	Fractionalization summary measure applied to linguistic group and population share data from Alesina et al. (2003) with the exception of the Netherlands (see Chapter 3, footnote 27)
eth_lin_pol	Linguistic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to linguistic group and population share data from Fearon (2002)
rel_ale_f	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Alesina et al. (2003) with the exception of Israel (see Chapter 3, footnote 26)
rel_ale_pol	Religious polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to religious group and population share data from Alesina et al. (2003) with the exception of Israel (see Chapter 3, footnote 26)
rel_fea_f	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Fearon and Laitin (2003*b*) with the exception of Israel (see Chapter 3, footnote 26)

continued from previous page

Abbreviation	**Name**	**Details and Sources**
rel_ann_f	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Annett (2001) with the exception of Israel (see Chapter 3, footnote 26)
rur_pop	Rural share of population	Percentage of population that is rural; average of yearly data (1960–2002) from the World Bank Development Indicators, Series SP.RUR.TOTL.ZS (World Bank Group 2002)
agr_emp	Agricultural employment, percentage	Percentage of labor force employed in agriculture; average of yearly data (1960–2002) from the World Bank Development Indicators, Series SL.AGR.EMPL.ZS (World Bank Group 2002)
agr_val	Agriculture value added, percentage	Agricultural value added as percent of GDP; average of yearly data (1960–2002) from the World Bank Development Indicators, Series NV.AGR.TOTL.ZS (World Bank Group 2002)
gini	Gini coefficient	World Bank Development Indicators, Series SI.POV.GINI (World Bank Group 2002)
inc_bot20	Income Share, Bottom 20%	Income share (percentage) of the bottom 20% from the World Bank Development Indicators, Series SI.DST.FRST.20 (World Bank Group 2002)
inc_top20	Income Share, Top 20%	Income share (percentage) of the top 20% from the World Bank Development Indicators, Series SI.DST.05TH.20 (World Bank Group 2002)

continued from previous page

Abbreviation	**Name**	**Details and Sources**
war_correl	Percentage of post-war period at war	Percentage of days in post-war period in which country was engaged in inter-state warfare; calculated by dividing the "Duration" variable from the Correlates of War's Inter-State War data set (Sarkees 2000) by the total number of days in the post-war period (1945–1997)
war_alvarez	Percentage of post-war period at war	Number of years for which the variable "War" from the Alvarez et al. (1999) data set is coded "1" to indicate a war of any type on the country's territory during that year divided by the total number of years in the data set (1945–1990)
trans	Democratic transition during post-war period	Dummy variable from the Alvarez et al. (1999) data set, the original variable for which is "Unstable"
high_inc	High income country	Dummy variable for high income countries, which assigns a value of 1 to countries classed by the World Bank as "high income" as part of the World Bank Development Indicators (World Bank Group 2002)
inc_step	Relative wealth of country	Step function assigning value of 1 to "high income" countries (per capita GNI of $9,075 or greater); 0.5 to "middle income" countries (per capita GNI between $735 and $9,075); and 0 to "low income" countries (per capita GNI of less than $735); all classifications taken from the World Bank Development Indicators (World Bank Group 2002)
ind_all	Additive index	Preferred operationalization of latent preference diversity; sum of variables `high_inc`, `trans`, `rur_pop`, `gini`, `eth_ale_pol`, and `eth_rel_pol`

continued from previous page

Abbreviation	Name	Details and Sources
ind_all_s	Additive index, standardized data	Another measure of latent preference diversity; same as `ind_all` but each summand is first standardized
scores	Factor scores	A third measure of latent preference diversity; factor scores resulting from principal factor analysis of `high_inc`, `trans`, `rur_pop`, `gini`, `eth_ale_pol`, and `eth_rel_pol` (one factor fitted)

`C4_part.txt`

Abbreviation	Name	Details and Sources
cntry	Country abbreviation	
date	Election date	Comparative Manifestos Group, Budge (2001)
socec_i	Socioeconomic cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage); derived from Comparative Manifestos Group data in Budge (2001)
rel_i	Religious cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage); derived from Comparative Manifestos Group data in Budge (2001)
urban_i	Urban–rural cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage); derived from Comparative Manifestos Group data in Budge (2001)

continued from previous page

Abbreviation	Name	Details and Sources
forp_i	Foreign policy cleavage salience	Country–time invariant method of calculating salience; derived from Comparative Manifestos Group data in Budge (2001)
cult_i	Cultural–ethnic cleavage salience	Country–time invariant method of calculating salience; derived from Comparative Manifestos Group data in Budge (2001)
pmat_i	Post-materialist cleavage salience	Country–time invariant method of calculating salience; derived from Comparative Manifestos Group data in Budge (2001)
dem_i	Democratic–authoritarian cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage); coded NA for all country–elections except for elections in Greece, Portugal, and Spain; derived from Comparative Manifestos Group data in Budge (2001)
forp_v	Foreign policy cleavage salience	Country–time variant method of calculating salience; derived from Comparative Manifestos Group data in Budge (2001)
cult_v	Cultural–ethnic cleavage salience	Country–time variant method of calculating salience; derived from Comparative Manifestos Group data in Budge (2001)
pmat_v	Post-materialist cleavage salience	Country–time variant method of calculating salience; derived from Comparative Manifestos Group data in Budge (2001)
n	Dimensionality	Summary measure N applied to cleavage salience calculated using the country–time variant method; derived from Comparative Manifestos Group data in Budge (2001)

continued from previous page

Abbreviation	**Name**	**Details and Sources**
nmol	Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time variant method; derived from Comparative Manifestos Group data in Budge (2001)
nlijp	Dimensionality	Summary measure NL, Lijphart equivalent, applied to cleavage salience calculated using the country–time variant method; derived from Comparative Manifestos Group data in Budge (2001)
nalt	Dimensionality	Summary measure N applied to cleavage salience calculated using the country–time invariant method; derived from Comparative Manifestos Group data in Budge (2001)
nmolalt	Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time invariant method; derived from Comparative Manifestos Group data in Budge (2001)
nlijpalt	Dimensionality	Summary measure NL, Lijphart equivalent, applied to cleavage salience calculated using the country–time invariant method; derived from Comparative Manifestos Group data in Budge (2001)

`C4_part_mean.txt`

Abbreviation	Name	Details and Sources
cntry	Country abbreviation	
n_mean	Mean Dimensionality	Summary measure N applied to cleavage salience calculated using the country–time variant method and averaged over the post-war period; derived from variable `n`
nmol_mean	Mean Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time variant method and averaged over the post-war period; derived from variable `nmol`
nlijp_mean	Mean Dimensionality	Summary measure NL, Lijphart equivalent, applied to cleavage salience calculated using the country–time variant method and averaged over the post-war period; derived from variable `nlijp`
nalt_mean	Mean Dimensionality	Summary measure N applied to cleavage salience calculated using the country–time invariant method and averaged over the post-war period; derived from variable `nalt`
nmolalt_mean	Mean Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time invariant method and averaged over the post-war period; derived from variable `nmolalt`
nlijpalt_mean	Mean Dimensionality	Summary measure NL, Lijphart equivalent, applied to cleavage salience calculated using the country–time invariant method and averaged over the post-war period; derived from variable `nlijpalt`

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Abbreviation	Name	Details and Sources
enid	Mean Dimensionality	Effective number of issue dimensions averaged over the post-war period from Nyblade (2004)
lijphart	Mean Dimensionality	Number of issue dimensions informally averaged over the post-war period from Lijphart (1999, 80–81)

B.2 Cases

`C4_latent.txt`

Cases are *most* countries that are classified as democracies for at least one election in the post-war period according to the Alvarez et al. (1996) criteria and that have a population of at least 200,000. "Most" is used in the prior sentence instead of "all" for the following reasons. All non-African countries coded as democratic in the Alvarez et al. (1999) data set, which encompasses the 1945–1990 time period, are included if they satisfy the population criterion. Reasonable extensions were made to this data set in the 1991–2002 time period. See the more detailed discussion about these selection criteria in the data appendix for Chapter 5, Appendix C, and specifically in the section for the data set `C5_leg_latent.txt`. In total, 71 countries satisfy both criteria but only 66 are fully observed. The data is cross-sectional in structure. The countries and their abbreviations in the data set follow alphabetically by country name.

Country Name	**Abbreviation**
Argentina	Argentina
Australia	Australia
Austria	Austria
Bahamas	Bahamas
Bangladesh	Bangladesh
Barbados	Barbados
Belgium	Belgium
Belize	Belize

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Country Name	**Abbreviation**
Bolivia	Bolivia
Brazil	Brazil
Bulgaria	Bulgaria
Canada	Canada
Chile	Chile
Colombia	Colombia
Costa Rica	CostaRica
Cyprus	Cyprus
Czech Republic	Czech
Denmark	Denmark
Dominican Republic	DominicanRep
Ecuador	Ecuador
El Salvador	ElSalvador
Estonia	Estonia
Finland	Finland
France	France
Germany	Germany
Greece	Greece
Guatemala	Guatemala
Honduras	Honduras
Hungary	Hungary
Iceland	Iceland
India	India
Ireland	Ireland
Israel	Israel
Italy	Italy
Jamaica	Jamaica
Japan	Japan
Latvia	Latvia
Lithuania	Lithuania
Luxembourg	Luxembourg
Malta	Malta
Mexico	Mexico
Myanmar	Myanmar
Netherlands	Netherlands

continued from previous page

Country Name	**Abbreviation**
New Zealand	NZ
Nicaragua	Nicaragua
Norway	Norway
Pakistan	Pakistan
Panama	Panama
Papua New Guinea	PapuaNew
Peru	Peru
Philippines	Philippines
Poland	Poland
Portugal	Portugal
Romania	Romania
Russia	Russia
Slovakia	Slovakia
Slovenia	Slovenia
Soloman Islands	SolomanIs
South Korea	SouthKorea
Spain	Spain
Sri Lanka	SriLanka
Suriname	Suriname
Sweden	Sweden
Switzerland	Switzerland
Taiwan	Taiwan
Thailand	Thailand
Trinidad & Tobago	Trinidad
Turkey	Turkey
United Kingdom	UK
United States	US
Uruguay	Uruguay
Venezuela	Venezuela

`C4_part.txt`

Cases are country–elections: all post-war elections in advanced industrial democracies that are included in the Comparative Manifestos Project (Budge 2001). The data is cross-sectional time series in structure. The number of countries totals 24 and the number of elections in each country ranges from 5 to 22 for a total of 352 country–elections. The countries, their abbreviations in the data set, and the elections included follow alphabetically by country name.

Country Name	**Abbreviation**	**Election Dates**
Australia	Australia	9/28/1946, 12/10/1949, 4/28/1951, 5/29/1954, 12/10/1955; 11/22/1958; 12/9/1961; 11/30/1963; 11/26/1966; 10/25/1969; 12/2/1972; 5/18/1974; 12/13/1975; 12/10/1977; 10/18/1980; 3/5/1983; 12/1/1984; 7/11/1987; 3/24/1990; 3/13/1993; 3/2/1996; 10/3/1998
Austria	Austria	10/9/1949; 2/22/1953; 5/13/1956; 5/10/1959; 11/18/1962; 3/6/1966; 3/1/1970; 10/10/1971; 10/5/1975; 5/6/1979; 4/24/1983; 11/23/1986; 10/7/1990; 10/9/1994; 12/17/1995
Belgium	Belgium	2/17/1946; 6/29/1949; 6/4/1950; 4/11/1954; 6/1/1958; 3/26/1961; 3/23/1965; 3/31/1968; 11/7/1971; 3/10/1974; 4/17/1977; 12/17/1978; 11/8/1981; 10/13/1985; 12/13/1987; 11/24/1991; 5/21/1995
Canada	Canada	6/11/1945; 6/27/1949; 8/10/1953; 6/10/1957; 3/31/1958; 6/18/1962; 4/8/1963; 11/8/1965; 6/25/1968; 10/30/1972; 7/8/1974; 5/22/1979; 2/18/1980; 9/4/1984; 11/21/1988; 10/25/1993; 6/2/1997

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Country Name	**Abbreviation**	**Election Dates**
Denmark	Denmark	10/30/1945; 10/28/1947; 9/5/1950; 4/21/1953; 9/22/1953; 5/14/1957; 11/15/1960; 9/22/1964; 11/22/1966; 1/23/1968; 9/21/1971; 12/4/1973; 1/9/1975; 2/15/1977; 10/23/1979; 12/8/1981; 1/10/1984; 9/8/1987; 5/10/1988; 12/12/1990; 9/21/1994; 3/11/1998
Finland	Finland	3/17/1945; 7/1/1948; 7/2/1951; 3/7/1954; 7/6/1958; 2/4/1962; 3/20/1966; 3/15/1970; 1/2/1972; 9/21/1975; 3/12/1979; 3/20/1983; 3/15/1987; 3/17/1991; 3/19/1995
France	France	11/10/1946; 6/17/1951; 1/2/1956; 11/23/1958; 11/18/1962; 3/5/1967; 6/23/1968; 3/4/1973; 3/12/1978; 6/14/1981; 3/16/1986; 6/5/1988; 3/21/1993; 5/25/1997
Germany	Germany	8/14/1949; 9/6/1953; 9/15/1957; 9/17/1961; 9/19/1965; 9/28/1969; 11/19/1972; 10/30/1976; 10/9/1980; 3/6/1983; 1/25/1987; 12/2/1990; 10/16/1994
Greece	Greece	11/17/1974; 11/20/1977; 10/18/1981; 6/2/1985; 6/18/1989; 11/5/1989; 4/8/1990; 10/10/1993; 9/2/1996
Iceland	Iceland	6/30/1946; 10/23/1949; 6/28/1953; 6/24/1956; 6/28/1959; 10/25/1959; 6/9/1963; 6/11/1967; 6/13/1971; 6/30/1974; 6/25/1978; 12/2/1979; 4/23/1983; 4/25/1987; 4/20/1991; 4/8/1995
Ireland	Ireland	2/4/1948; 5/30/1951; 4/18/1954; 3/5/1957; 10/4/1961; 4/7/1965; 6/16/1969; 2/28/1973; 6/16/1977; 6/11/1981; 2/18/1982; 11/24/1982; 2/17/1987; 6/15/1989; 11/25/1992; 6/6/1997
Israel	Israel	1/25/1949; 7/30/1951; 7/25/1955; 7/3/1959; 8/15/1961; 11/2/1965; 10/28/1969; 12/31/1973; 5/17/1977; 6/30/1981; 7/23/1984; 11/1/1988; 6/23/1992; 5/29/1996

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Country Name	**Abbreviation**	**Election Dates**
Italy	Italy	6/2/1946; 4/18/1948; 6/7/1953; 5/25/1958; 4/28/1963; 5/19/1968; 5/7/1972; 6/20/1976; 6/3/1979; 6/26/1983; 6/14/1987; 4/5/1992; 3/27/1994; 4/21/1996
Japan	Japan	11/20/1960; 11/21/1963; 1/29/1967; 12/27/1969; 12/10/1972; 12/5/1976; 10/7/1979; 6/22/1980; 12/18/1983; 7/6/1986; 2/18/1990; 7/18/1993; 10/20/1996
Luxembourg	Luxembourg	6/6/1948; 6/3/1951; 5/30/1954; 2/1/1959; 6/7/1964; 12/15/1968; 5/26/1974; 6/10/1979; 6/17/1984; 6/18/1989; 6/12/1994
Netherlands	Netherlands	5/17/1946; 7/7/1948; 6/25/1952; 6/13/1956; 3/12/1959; 5/15/1963; 2/15/1967; 3/28/1971; 11/29/1972; 5/25/1977; 5/26/1981; 9/8/1982; 5/21/1986; 9/6/1989; 5/3/1994; 5/6/1998
Norway	Norway	10/8/1945; 10/10/1949; 10/12/1953; 10/7/1957; 9/11/1961; 9/12/1965; 9/7/1969; 9/9/1973; 9/11/1977; 9/14/1981; 9/8/1985; 9/10/1989; 9/12/1993; 9/16/1997
New Zealand	NZ	11/27/1946; 11/30/1949; 9/1/1951; 11/13/1954; 11/30/1957; 11/26/1960; 11/30/1963; 11/26/1966; 11/29/1969; 11/25/1972; 11/29/1975; 11/25/1978; 11/28/1981; 7/14/1984; 8/15/1987; 11/27/1990; 11/6/1993; 10/15/1996
Portugal	Portugal	4/25/1975; 4/25/1976; 10/5/1979; 10/5/1980; 4/25/1983; 10/6/1985; 7/19/1987; 10/6/1991; 10/1/1995
Spain	Spain	10/28/1982; 6/22/1986; 10/29/1989; 6/6/1993; 3/3/1996

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Country Name	**Abbreviation**	**Election Dates**
Sweden	Sweden	9/19/1948; 9/21/1952; 9/26/1956; 6/1/1958; 9/18/1960; 9/20/1964; 9/15/1968; 9/20/1970; 9/16/1973; 9/19/1976; 9/16/1979; 9/19/1982; 9/15/1985; 9/18/1988; 9/15/1991; 9/18/1994; 9/20/1998
Switzerland	Switzerland	10/26/1947; 10/28/1951; 10/30/1955; 10/25/1959; 10/27/1963; 10/29/1967; 10/31/1971; 10/26/1975; 10/21/1979; 10/23/1983; 10/18/1987; 10/20/1991; 10/22/1995
United Kingdom	UK	7/5/1945; 2/23/1950; 10/25/1951; 5/26/1955; 10/8/1959; 10/15/1964; 3/31/1966; 6/18/1970; 2/28/1974; 10/10/1974; 5/3/1979; 6/9/1983; 6/11/1987; 4/9/1992; 5/1/1997
United States	US	11/2/1948; 11/4/1952; 11/6/1956; 11/8/1960; 11/3/1964; 11/5/1968; 11/7/1972; 11/2/1976; 11/4/1980; 11/6/1984; 11/8/1988; 11/3/1992; 11/5/1996

`C4_part_mean.txt`

Cases are all 24 advanced industrial democracies included in the Comparative Manifestos Project (Budge 2001). The data is cross-sectional in structure. The countries and their abbreviations in the data set follow alphabetically by country name. Note that Nyblade (2004) only provides data on 17 of these countries (the Western European ones). Accordingly, the data set records all other countries as missing data on the variable that contains his estimated mean dimensionality, `enid`.

Country Name	**Abbreviation**
Australia	Australia
Austria	Austria
Belgium	Belgium
Canada	Canada
Denmark	Denmark
Finland	Finland
France	France
Germany	Germany
Greece	Greece
Iceland	Iceland
Ireland	Ireland
Israel	Israel
Italy	Italy
Japan	Japan
Luxembourg	Luxembourg
Netherlands	Netherlands
New Zealand	NZ
Norway	Norway
Portugal	Portugal
Spain	Spain
Sweden	Sweden
Switzerland	Switzerland
United Kingdom	UK
United States	US

Appendix C

Data for Chapter 5

Five data sets were used in Chapter 5. The first contains original time series cross-sectional data on legislative electoral contests and latent diversity; the second contains replication cross-sectional data on legislative electoral contests from Cox combined with the preferred estimate of latent preference diversity developed in Chapter 4; the third contains original time series cross-sectional data on separately-elected executive electoral contests and latent diversity; the fourth contains original cross-sectional data on separately elected executive electoral contests and latent diversity (cross-time averages of the third data set); and the fifth contains original time series cross-sectional data on legislative electoral contests and particized dimensionality. The names of the tab delimited text files on the accompanying CD-ROM are `C5_leg_latent.txt`, `C5_legcox_latent.txt`, `C5_exec_latent.txt`, `C5_execcs_latent.txt`, and `C5_leg_part.txt`, respectively. All five data sets are also available upon request from the author. The variables and cases in each data set are described in turn. When sources are not provided, the data is original. A detailed coding book containing country-specific data sources is available from the author as only a general discussion of these matters follows. Missing data is denoted by "NA".

C.1 Variables

`C5_leg_latent.txt`

Abbreviation	**Name**	**Details and Sources**
cntry	Country abbreviation	
date	Date of legislative election	Numerous general and country-specific sources, (e.g., Mackie and Rose 1991); see variable `epsf` for sources

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Abbreviation	Name	Details and Sources
year	Year of legislative election	Used for rectangularizing data; same as year appearing in `date` variable except when a country held two or more elections in the same year; for these cases, the year is either the preceding or following year of the actual election date, whichever is closer
oecd	Consolidated democracy, dummy variable	Pre-1990 OECD members plus Israel and minus Turkey; OECD membership list from the OECD web page, `www.oecd.org/home`
cs_80s	Included in 1980s cross-section, dummy variable	Fully observed election closest to 1985 for each country holding elections in the 1980s; earlier election in the case of a tie
cs_90s_1	Included in 1990s cross-section, dummy variable	Fully observed election closest to 1995 for each country holding elections in the 1990s; earlier election in the case of a tie
cs_90s_2	Included in 1990s cross-section, dummy variable	Same as variable `cs_90s_1` except for consolidated democracies (indicated by variable `oecd`); in this case, election subject to additional criterion of not being held under a new electoral system
fused	Fused legislative and executive election, dummy variable	One ballot cast for both legislative and executive electoral contests although different electoral systems then translate the votes into seats; coding based on numerous general and country-specific sources, particularly Taagepera and Grofman (1985), Mackie and Rose (1991), Nohlen (1993), Lijphart (1994), Jones (1995), Jones (1997*b*), Mackie and Rose (1997), Cox (1997), Rose, Munroe and Mackie (1998), Shvetsova (1999), and Caramani (2000)

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Abbreviation	Name	Details and Sources
epsf	Legislative electoral party system fractionalization	Lijphart (1994) and Cox's (1997) counting rules are used (parties that ran a joint list are counted as one party) as is Taagepera's (1997) procedure for dealing with incomplete data; following convention, the decisive upper-tier distribution of votes is used for mixed-member proportional electoral systems; for mixed-member majoritarian and multi-ballot multi-tier electoral systems, votes are totaled from both ballots where possible. Data are from numerous general and country-specific sources, particularly Mackie and Rose (1991), Nohlen (1993), Lijphart (1994), Mackie and Rose (1997), Rose, Munroe and Mackie (1998), University of Essex (2002), Georgetown (2003), Caramani (2000), Nohlen (2001), Nordsieck (2004), and Derksen (2002)
lml	Logged mean legislative lower tier district magnitude	Natural log; total contested lower tier assembly seats divided by total number of lower tier electoral districts; for electoral systems with run-off electoral formulas, the 1^{st} round district magnitude is used; see variable `fused` for sources
up	Square root of percentage of legislative seats allocated in an upper tier	Elections held under electoral system without upper tier coded "0"; see variable `fused` for sources

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Abbreviation	**Name**	**Details and Sources**
prox	Proximity of separately elected executive and legislative elections	Parliamentary regimes coded "0"; for presidential regimes, proximity formula from Cox (1997) is used but modified to accommodate cases without executive elections on both sides: if case is not followed by an executive election (either because the case is too recent or because of a transition to dictatorship), the date of the $t+1$-th election is extrapolated based on the prior executive term ($t-2$ to $t-1$); if case is not preceded by an executive election for comparable reasons, the $t+1$-th election is used in the numerator instead of the $t-1$-th and the next term of the executive ($t+1$ to $t+2$) is used in the denominator; see variable `epsf` for sources of the data on which the calculation is based
execf	Executive electoral party system fragmentation, closest election	Parliamentary regimes coded "0"; see variable `epsf` for sources of data for presidential regimes
sep_exec	Separately elected executive, dummy variable	Executive either elected on a separate ballot from the legislature or by a fused vote where two electoral systems translate one ballot into seats; see variable `fused` for sources
ind_all	Additive index	Preferred operationalization of latent preference diversity from Chapter 4
ind_s	Additive index, standardized data	Another measure of latent preference diversity from Chapter 4
scores	Factor scores	Another measure of latent preference diversity from Chapter 4
eth_ale_pol	Ethnic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to ethnic group and population share data from Alesina et al. (2003)

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Abbreviation	Name	Details and Sources
eth_elf_f	Ethnic fractionalization	Ethno-linguistic fractionalization (ELF) index from Fearon (2002), supplemented by data from Roeder (2001)
rel_ale_pol	Religious polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to religious group and population share data from Alesina et al. (2003) with the exception of Israel (see Chapter 3, footnote 26)

`C5_legcox_latent.txt`

Abbreviation	Name	Details and Sources
cntry	Country abbreviation	
epsf	Legislative electoral party system fractionalization	Fractionalization transformation of effective number of electoral parties data from Cox (1997)
lml	Logged median lower tier legislative district magnitude	Natural log of data from Cox (1997)
up	Square root of percentage of legislative seats allocated in an upper tier	Square root of data from Cox (1997)

continued from previous page

Abbreviation	Name	Details and Sources
prox	Time to closest presidential election	Cox (1997)
execf	Executive electoral party system fractionalization	Cox (1997); parliamentary regimes coded "0" as in Cox; for presidential regimes, fractionalization transformation of original effective number of presidential candidates is used
ind_all	Latent preference diversity, additive index	Preferred operationalization of latent preference diversity from Chapter 4

`C5_exec_latent.txt`

See the corresponding variable in `C5_leg_latent.txt` for details and sources.

Abbreviation	**Name**	**Details and Sources**
cntry	Country abbreviation	
date	Date of election	
year	Year of election	
oecd	Consolidated democracy, dummy variable	
cs_90s	Included in 1990s cross-section, dummy variable	See variable `cs_90s_1` in the `C5_leg_latent.txt` data set
eecf	Executive electoral party system fractionalization	See variable `epsf` in the `C5_leg_latent.txt` data set
run	Dummy variable for run-off electoral system	Coded "0" for simple plurality electoral formula and "1" otherwise; see variable `fused` in the `C5_leg_latent.txt` data set for sources

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Abbreviation	**Name**	**Details and Sources**
ind_all	Additive index	
ind_s	Additive index, standardized data	
scores	Factor scores	
eth_ale_pol	Ethnic polarization	
eth_elf_f	Ethnic fractionalization	
rel_ale_pol	Religious polarization	

`C5_execcs_latent.txt`

Abbreviation	Name	Details and Sources
cntry	Country abbreviation	
eecf_mean	Mean executive electoral party system fractionalization	Executive electoral party system fractionalization averaged over the post-war period; derived from variable `eecf` in data set `C5_exec_latent.txt`
run_mean	Mean indicator of run-off electoral system	Dummy variable for run-off electoral system averaged over the post-war period; derived from variable `run` in data set `C5_exec_latent.txt`
ind_all	Latent preference diversity, additive index	Preferred indicator of latent preference diversity from Chapter 4

`C5_leg_part.txt`

Unless otherwise noted, see the corresponding variable in `C5_leg_latent.txt` for details and sources.

Abbreviation	**Name**	**Details and Sources**
cntry	Country abbreviation	
date	Date of legislative election	
year	Year of legislative election	
fused	Fused legislative and executive election, dummy variable	
epsf	Legislative electoral party system fractionalization	
lml	Logged mean legislative lower tier district magnitude	
up	Square root of percentage of legislative seats allocated in an upper tier	
prox	Proximity of separately elected executive and legislative elections	
execf	Executive electoral party system fragmentation, closest election	
sep_exec	Separately elected executive, dummy variable	
n	Dimensionality	Summary measure N applied to cleavage salience calculated using the country–time variant method from Chapter 4

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Abbreviation	Name	Details and Sources
nmol	Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time variant method from Chapter 4
nlijp	Dimensionality	Summary measure NL, Lijphart equivalent, applied to cleavage salience calculated using the country–time variant method from Chapter 4
nalt	Dimensionality	Summary measure N applied to cleavage salience calculated using the country–time invariant method from Chapter 4
nmolalt	Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time invariant method from Chapter 4
nlijpalt	Dimensionality	Summary measure NL, Lijphart equivalent, applied to cleavage salience calculated using the country–time invariant method from Chapter 4

C.2 Cases

`C5_leg_latent.txt`

The unit of analysis is a country–legislative election and the data set is cross-sectional time series in structure. All legislative elections held from 1945–2002 in countries during years when a country was considered democratic by Alvarez et al.'s (1996) coding rules were included subject to two restrictions discussed below. The Alvarez et al. (1999) data set was relied upon to determine whether or not a country was democratic in a particular year. Specifically, elections held in countries in years where the variable 'REG' (regime type) from this data set was coded 0 ("democracy") were included. Additional research was necessary when an election occurred in the same year in which a transition took place. Secondary sources were used to decide if the election either preceded the coup or followed the transition to democracy. In both of these cases, the country–election was included.

One unfortunate feature of the Alvarez et al. (1999) data set is that the last year it covers is 1989. Many regime classifications of countries already in the data set were extrapolated into the 1990s. Elections in new countries created in the 1990s such as Eastern European states like Estonia were included when the countries clearly satisfied the Alvarez et al. (1996) criteria for democracy. Countries that may satisfy Alvarez et al.'s (1996) criteria for democracy for the first time in the 1990s but which were not actually assessed against this

criteria (and thus were not included in the data set) are Guyana, Paraguay, and many of the ex-Soviet republics in Central Asia such as Georgia.

Two restrictions were applied to exclude some country–elections satisfying the above criteria from the data set. First, only elections in countries with populations of 200,000 or more were included. Elections in tiny countries such as Liechtenstein and St. Kitts and Nevis with populations of roughly 30,000 do not seem comparable to elections in large countries such as the United States with a population of roughly 300 million. Second, elections in African countries were excluded. Until recently, there were few democracies in Africa and most that existed were quite unstable (democratic for one or two elections before succumbing to dictatorship). Further, data on African countries is sparse. These two practical issues led to the exclusion of elections from this region.

A few elections were overlooked and did not make it into the data set. These include parliamentary elections in Greece from 1951–1966 and on 17 November 1974; Italy, on 2 June 1946; Luxembourg, on 6 June 1948; and Spain, on 15 June 1977.

For reasons of space, a list of the data set's 742 legislative elections held in 71 countries is not provided. A list of the 71 countries included may be found in the data appendix for Chapter 4, Appendix B, in the section `C4_latent.txt`. Keep in mind that country–elections held under a fused electoral system need to be eliminated from the data set before replication of the results in Chapter 5 can occur. Once this is done, 715 legislative elections in 69 countries remain.

`C5_legcox_latent.txt`

Cases are an election from the 1980s in each of 51 democracies without fused electoral systems. The specific election was selected by Cox (1997). The data is thus cross-sectional in structure. The countries and their abbreviations in the data set are as specified in the Chapter 3 data appendix, Appendix A.

`C5_exec_latent.txt`

All separately elected executive elections satisfying the democratic and population criteria discussed above for inclusion in the `C5_leg_latent.txt` data set are included in this data set, African country–elections and caveats aside as before. Each case is a country–election, although this time an executive election. The data set consists of 244 country–elections held in 39 countries. However, fused elections are included in the data set. They must be deleted before attempting a replication of the results in Chapter 5. So too must three other elections, each of which was the sole election held in its country, be deleted: Bangladesh, 15 October 1986; Estonia, 20 September 1992; and Slovakia, 15 May 1999. Once all of these cases are eliminated, 213 country–elections in 34 countries remain. The data is cross-section time series in structure. A list of the countries and elections in the data set follows alphabetically by country name.

Country Name	**Abbreviation**	**Election Dates**
Argentina	Argentina	11/11/51; 2/23/58; 3/11/73; 9/23/73; 10/30/83; 5/14/89; 5/14/95; 10/24/99
Austria	Austria	5/6/51; 5/5/57; 4/28/63; 5/23/65; 4/25/71; 6/23/74; 5/15/80; 5/4/86; 4/26/92; 4/19/98
Bangladesh	Bangladesh	10/15/86
Bolivia	Bolivia	7/1/79; 6/29/80; 7/14/85; 5/7/89; 6/6/93; 6/1/97
Brazil	Brazil	12/2/45; 10/3/50; 10/3/55; 10/3/60; 11/15/89; 10/3/94; 10/4/98; 10/6/02
Bulgaria	Bulgaria	1/12/92; 10/27/96; 11/11/01
Chile	Chile	9/4/46; 9/4/52; 9/4/58; 9/4/64; 9/4/70; 12/14/89; 12/11/93; 12/12/99
Colombia	Colombia	4/19/74; 6/4/78; 5/30/82; 5/25/86; 5/27/90; 5/29/94; 5/31/98; 5/26/02
CostaRica	CostaRica	7/26/53; 2/2/58; 2/4/62; 2/6/66; 2/1/70; 2/3/74; 2/5/78; 2/7/82; 2/2/86; 2/5/90; 2/6/94; 2/1/98; 2/3/02
Dominican Republic	DominicanRep	12/20/62; 7/1/66; 5/16/70; 5/16/74; 5/16/78; 5/16/82; 5/16/86; 5/16/90; 5/16/94; 5/16/96; 5/16/00

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Country Name	**Abbreviation**	**Election Dates**
Ecuador	Ecuador	6/6/48; 6/1/52; 6/3/56; 6/5/60; 7/16/78; 1/29/84; 1/31/88; 5/17/92; 5/19/96; 5/31/98; 10/20/02
El Salvador	ElSalvador	3/25/84; 3/19/89; 3/20/94; 3/20/94
Estonia	Estonia	9/20/92
Finland	Finland	1/16/50; 1/16/56; 1/15/62; 1/15/68; 1/15/78; 1/17/82; 1/31/88; 1/11/94; 1/16/00
France	France	12/5/65; 6/1/69; 5/5/74; 4/26/81; 4/24/88; 4/24/95; 4/21/02
Guatemala	Guatemala	11/12/50; 1/19/58; 3/6/66; 3/1/70; 3/3/74; 3/5/78; 3/7/82; 11/3/85; 11/16/90; 11/12/95; 11/7/99
Honduras	Honduras	9/21/57; 3/28/71; 11/29/81; 11/24/85; 11/26/89; 11/28/93; 11/30/97; 11/25/01
Iceland	Iceland	6/29/52; 6/30/68; 6/29/80; 6/25/88; 6/29/96
Ireland	Ireland	6/14/45; 6/17/59; 6/1/66; 5/30/73; 11/7/90; 10/30/97
Israel	Israel	5/29/96; 5/17/99; 2/6/01
Lithuania	Lithuania	2/14/93; 12/21/97; 12/22/02
Mexico	Mexico	8/21/94; 7/2/00
Myanmar	Myanmar	3/12/52; 3/13/57
Nicaragua	Nicaragua	9/1/84; 2/25/90; 10/22/96; 11/4/01
Panama	Panama	5/9/48; 5/11/52; 5/13/56; 5/8/60; 5/10/64; 5/12/68; 5/8/94; 5/2/99
Peru	Peru	6/17/56; 6/10/62; 6/9/63; 5/18/80; 4/14/85; 4/8/90; 9/4/95; 4/8/01
Philippines	Philippines	4/23/46; 11/9/49; 11/10/53; 11/12/57; 11/14/61; 11/9/65; 11/11/69; 5/11/87; 5/11/92; 5/11/98
Poland	Poland	11/25/90; 11/5/95; 10/8/00
Portugal	Portugal	6/27/80; 1/26/86; 1/13/91; 1/10/96; 1/14/01
Romania	Romania	5/20/90; 9/27/92; 11/3/96; 11/26/00
Russia	Russia	6/12/91; 6/16/96; 3/26/00
Slovakia	Slovakia	5/15/99

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Country Name	**Abbreviation**	**Election Dates**
Slovenia	Slovenia	12/6/92; 11/23/97; 11/10/02
South Korea	SouthKorea	12/16/87; 12/18/92; 12/18/97; 12/19/02
Sri Lanka	SriLanka	12/19/88; 11/9/94; 12/21/99
Taiwan	Taiwan	3/23/96; 3/18/00
Uruguay	Uruguay	11/29/46; 11/24/50; 11/26/54; 11/30/58; 11/25/62; 11/27/66; 11/28/71; 11/25/84; 11/25/89; 11/27/94; 10/31/99
United States	US	11/2/48; 11/4/52; 11/6/56; 11/8/60; 11/3/64; 11/5/68; 11/7/72; 11/2/76; 11/4/80; 11/6/84; 11/8/88; 11/3/92; 11/5/96; 11/7/00
Venezuela	Venezuela	12/14/47; 12/7/58; 12/1/63; 12/1/68; 12/9/73; 12/3/78; 12/4/83; 12/4/88; 12/5/93; 2/6/98; 7/30/00

`C5_execcs_latent.txt`

Cases are the 32 countries from the `C5_exec_latent.txt` data set that had at least one fully observed case after eliminating fused and single country elections. The data is cross-sectional in structure, containing cross-time averages for each country. Means are taken by first excluding all cases with missing data. A list of the countries and their abbreviations in the data set follows below.

Country Name	Abbreviation
Argentina	Argentina
Austria	Austria
Brazil	Brazil
Bulgaria	Bulgaria
Chile	Chile
Colombia	Colombia
CostaRica	CostaRica
Dominican Republic	DominicanRep
Ecuador	Ecuador
El Salvador	ElSalvador
Finland	Finland
France	France
Guatemala	Guatemala
Honduras	Honduras
Iceland	Iceland
Ireland	Ireland
Israel	Israel
Lithuania	Lithuania
Mexico	Mexico
Nicaragua	Nicaragua
Panama	Panama
Peru	Peru
Philippines	Philippines
Poland	Poland
Portugal	Portugal
Romania	Romania
Russia	Russia
Slovenia	Slovenia
South Korea	SouthKorea
Sri Lanka	SriLanka
United States	US
Venezuela	Venezuela

`C5_leg_part.txt`

Cases are all country–elections from 1945 through 2002 both satisfying the democratic criteria for inclusion in the `C5_leg_latent.txt` data set (see the discussion under the `C5_leg_latent.txt` data set for these criteria) and included in the Comparative Manifestos Project (Budge 2001), with a few exceptions. Five elections included in the Comparative Manifestos Project but not included in the `C5_leg_latent.txt` data set are not included in this data set: Greece, 17 November 1974; Italy, 2 June 1946; Luxembourg, 6 June 1948; Portugal, 25 April 1975; and Spain, 15 June 1977. All of these country–elections except for the Portugese one were simply overlooked during data collection, as was mentioned above. The Portugese election was deliberately excluded, however, since Alvarez et al. (1996) did not code Portugal as democratic until 1976 (Alvarez et al. 1999). All in all, the intersection of the two data sets yields three hundred and forty-seven elections in twenty-four advanced industrial democracies. All are fully observed. None of the country–elections were held under a fused electoral system, so despite the inclusion of the `fused` variable in the data set, there is no additional prepatory work that needs to be done before proceeding to an analysis using this data set. The data is obviously time series cross-sectional in structure, as before. A listing of the country–elections in the data set (plus the five overlooked elections) may be found in the Chapter 4 data appendix, Appendix B, as part of the `C4_part.txt` data set section.

Appendix D

Data for Chapter 6

The data set is a tab delimited text file labeled `C6.txt` on the accompanying CD-ROM. It is also available upon request from the author. Rows represent countries and columns the variables described below. Missing data is denoted "NA".

D.1 Variables

Abbreviation	**Name**	**Details and Sources**
socec_i	Socioeconomic cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage)
rel_i	Religious cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage)
urban_i	Urban–rural cleavage salience	Country–time invariant method of calculating salience (no country–time specific modifications exist for this cleavage)
forp_v	Foreign policy cleavage salience	Country–time variant method of calculating salience
cult_v	Cultural–ethnic cleavage salience	Country–time variant method of calculating salience
nmol_mean	Mean Dimensionality	Summary measure NP, Molinar's N, applied to cleavage salience calculated using the country–time variant method and averaged over the post-war period

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Abbreviation	Name	Details and Sources
eth_ale_f	Ethnic fractionalization	Fractionalization summary measure applied to ethnic group and population share data from Alesina et al. (2003)
eth_ale_pol	Ethnic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to ethnic group and population share data from Alesina et al. (2003)
eth_fea_f	Ethnic fractionalization	Fractionalization summary measure applied to ethnic group and population share data from Fearon (2002)
eth_fea_pol	Ethnic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to ethnic group and population share data from Fearon (2002)
eth_elf_f	Ethnic fractionalization	Ethno-linguistic fractionalization (ELF) index from Fearon (2002), supplemented by data from Roeder (2001)
eth_lin_f	Linguistic fractionalization	Fractionalization summary measure applied to linguistic group and population share data from Alesina et al. (2003) with the exception of the Netherlands (see footnote 27)
eth_lin_pol	Linguistic polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to linguistic group and population share data from Fearon (2002)
rel_ale_f	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Alesina et al. (2003) with the exception of Israel (see footnote 26)
rel_ale_pol	Religious polarization	Polarization index of Montalvo and Reynal-Querol (2000) applied to religious group and population share data from Alesina et al. (2003)

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Abbreviation	**Name**	**Details and Sources**
rel_fea_f	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Fearon and Laitin (2003*b*) with the exception of Israel (see footnote 26)
rel_ann_f	Religious fractionalization	Fractionalization summary measure applied to religious group and population share data from Annett (2001) with the exception of Israel (see footnote 26)
rur_pop	Rural share of population	Percentage of population that is rural; average of yearly data (1960–2002) from the World Bank Development Indicators, Series SP.RUR.TOTL.ZS (World Bank Group 2002)
agr_emp	Agricultural employment, percentage	Percentage of labor force employed in agriculture; average of yearly data (1960–2002) from the World Bank Development Indicators, Series SL.AGR.EMPL.ZS (World Bank Group 2002)
agr_val	Agriculture value added, percentage	Agricultural value added as percent of GDP; average of yearly data (1960–2002) from the World Bank Development Indicators, Series NV.AGR.TOTL.ZS (World Bank Group 2002)
gini	Gini coefficient	World Bank Development Indicators, Series SI.POV.GINI (World Bank Group 2002)
inc_bot20	Income Share, Bottom 20%	Income share (percentage) of the bottom 20% from the World Bank Development Indicators, Series SI.DST.FRST.20 (World Bank Group 2002)

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Abbreviation	**Name**	**Details and Sources**
inc_top20	Income Share, Top 20%	Income share (percentage) of the top 20% from the World Bank Development Indicators, Series SI.DST.05TH.20 (World Bank Group 2002)
war_correl	Percentage of post-war period at war	Percentage of days in post-war period in which country was engaged in inter-state warfare; calculated by dividing the "Duration" variable from the Correlates of War's Inter-State War data set (Sarkees 2000) by the total number of days in the post-war period (1945–1997)
war_alvarez	Percentage of post-war period at war	Number of years for which the variable "War" from the Alvarez et al. (1999) data set is coded "1" to indicate a war of any type on the country's territory during that year divided by the total number of years in the data set (1945–1990)

D.2 Cases

Cases are all 24 advanced industrial democracies included in the Comparative Manifestos Project (Budge 2001). The data is cross-sectional in structure. The countries and their abbreviations in the data set follow alphabetically by country name.

Country Name	**Abbreviation**
Australia	Australia
Austria	Austria
Belgium	Belgium
Canada	Canada
Denmark	Denmark
Finland	Finland
France	France
Germany	Germany
Greece	Greece
Iceland	Iceland
Ireland	Ireland
Israel	Israel
Italy	Italy
Japan	Japan
Luxembourg	Luxembourg
Netherlands	Netherlands
New Zealand	NZ
Norway	Norway
Portugal	Portugal
Spain	Spain
Sweden	Sweden
Switzerland	Switzerland
United Kingdom	UK
United States	US

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