# The Great Powers and the International System

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# Chapter 1

# Introduction

In Thucudides' *History of the Peloponnesian War*, the author recounts an incident in which the Athenians sailed to the island of Melos, a Spartan colony, and two Athenian Generals, Cleomedes and Tisias, sent their representatives to negotiate with the Council of the Melians. What makes their dialogue especially noteworthy is the Athenians' bald statement at the onset that, in their negotiations, the Melians should not appeal to the Athenians' sense of justice, because, quite simply, "the strong do what they can and the weak suffer what they must." The sphere of power is independent of the sphere of justice, rendering the state an autonomous actor, able to pursue its own interests, limited only by its own capabilities. Millenia later, in an era in which Great Powers have given way to superpowers and nuclear weapons have magnified the disparity between strong and weak to a degree unimaginable to the Athenians, the aphorism remains familiar and seems more applicable than ever.

It is surprising, therefore, to find some of the most adroit statesmen at the helm of some of the most powerful states of the past two centuries expressing near-helplessness in the face of the impersonal forces that shape world politics. No less effective a diplomat than Charles de Talleyrand-Périgord famously said that "[t]he art of statesmanship is to foresee the inevitable and to expedite its occurrence." Otto von Bismarck, architect of German unification, wrote that "[e]ven victorious wars can only be justified when they are forced upon a nation."<sup>1</sup> Such quotes, indicating as they do that even Great Powers often have very little freedom of action amid the overwhelming pull of international events, seem puzzling coming from statesmen famous for their ability to produce the outcomes they desired.

The tension between these two perspectives—that Great Powers are free to act, unhindered by external constraints; and that even the actions of Great Powers are dictated largely by circumstance—, though rarely made explicit, divides our understanding of international relations. The overwhelming majority of explanations of Great Power behavior in history and political science are premised on one or the other. As long ago as 1841, Thomas Carlyle wrote that "the history of the world is but the biography of great men"; Karl Marx claimed a decade later that people

<sup>&</sup>lt;sup>1</sup>Quoted in Bernhardi (1914, 38).

make history, but not under circumstances of their own choosing.<sup>2</sup> More recently, Kenneth Waltz (1959), describing what was to become a foundational distinction in the field of international relations, wrote of "first and second image" explanations of state behavior, which look to the internal characteristics of states as the sources of state action, and "third image" explanations, in which "[t]he requirements of state action are... imposed by the circumstances in which all states exist." (160)

Although well established, this division is ill-advised, because it detracts from and fragments our understanding of international politics. When astronomers have sought to understand the behavior of a planet, at least since Copernicus, they have built a model of the larger solar system that governs its motion—one in which the parts of the system both depend on and constitute the larger whole. Similarly, students of fields as diverse as medicine, agriculture, and psychology favor systemic explanations of their subject matter that provide a comprehensive understanding that a more atomistic point of view cannot. By contrast, the division in international relations between explanations that focus on context and those that emphasize state agency perpetuates an artificial distinction—artificial because the circumstances that constrain and compel state action are also produced by state action.<sup>3</sup> Explanations that lack an account of this reciprocal relationship cannot hope to offer a comprehensive explanation of international politics.

Conceptualizing states, not as individuals or one of a pair, but rather as one state embedded in a larger system of states, can improve our ability to understand that state's behavior. For example, as I demonstrate in Chapter 4, a focus on America's reaction to changes in the international system, rather than to characteristics or actions of the Soviet Union, makes it easier to understand what Anatoly Chernyaev (2000, 201) called the "Lost Year"—the puzzling gap between the sweeping Soviet military and ideological *démarche* of December 1988 and the accommodationist American response in November of 1989. A focus on American attention to the international system helps us understand the American turn away from isolationism around the time of the fall of France; and in the 1830s, the Great Powers' focus on the ideological division of the system (between legitimist and constitutional states) explains the parallel rift that developed in their alliance structure.

Moreover, these insights also help to clarify the connections between events such as the ones just described and prior events—thereby lengthening the causal chain and expanding the scope of our understanding. In the case of the Cold War we can understand not just how the United States reacted to changes in the international system but how, and why, the Soviets produced that change. Similarly, we can understand the forces that led the Germans prior to World War II and the Europeans prior to 1830 to produce changes in their respective systems. In each instance we can see how prior state action produced a change in the systemic context that prompts state ac-

<sup>&</sup>lt;sup>2</sup>Carlyle's quote is *verbatim*, from his *Heroes and Hero-Worship*; Marx's aphorism has been distilled by time, which has done it a considerable kindness. The actual quote, from *The Eighteenth Brumaire of Louis Napoleon*, is far less succinct: "Men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past."

<sup>&</sup>lt;sup>3</sup>The circumstances that forced war on Bismarck, for example, would hardly have existed without him, a fact of which he was surely well aware. Indeed, as he proved with maneuvers such as his creative retransmission of the Ems Dispatch, he was not at all above provoking others to force him to fight.

tion, which in turn produced subsequent state action—a systemic dynamic come full circle.

The goal of this book is to elaborate and test this systemic theory of international politics. The theory is designed to provide the same holistic understanding of interstate relations that systemic perspectives provide in other fields. It is not the first such portrayal, by any means, although systemic theories remain quite rare;<sup>4</sup> and it is noteworthy that those few systemic theories that do exist in the international relations literature have been unusually persistent<sup>5</sup>—a fact that may reflect scholars' intuitive sense that thinking systemically about international politics is an important objective. The book provides an empirically and theoretically rigorous explanation of how the Great Powers simultaneously shape and are influenced by the structure of the international system. Using both statistical methods and historical case studies, it demonstrates that structural balances and Great Power actions over the past two centuries strongly support the argument.

Understanding why integrating the behavior of the states and the structure of the international system is a difficult problem, and how we can go about resolving it, requires a bit of preliminary background in the form of a foray into the agentstructure debate and its application to international relations.

# The Agent-Structure Debate

The tension between explanations based on the behavior of unconstrained agents and explanations based on the exigencies of their circumstances has manifested itself in international relations in what has come to be known as the "agent-structure debate." The question at the heart of the debate—whether to focus on people or on their circumstances when explaining political events—is among the most fundamental issues in the study of politics. I will argue that the agent-structure debate should have no victor: in the realm of international politics, each has an impact on the other, and neither should be granted theoretical primacy. Before doing so, however, I discuss the meanings of the terms.

### The Nature of Structure

First, we must understand the meaning of the word "structure." Philip Cerny, who examines structure and agency in considerable depth, defines structure as "the pattern of constraints and opportunities for action and choice."<sup>6</sup> Though succinct, this definition is one step removed from the one that we seek, because it conflates an

<sup>6</sup>1990, 4.

<sup>&</sup>lt;sup>4</sup>There may be many reasons for the rarity of these works. Many are controversial, few as much as Waltz's—a fact that may cast a pall on systemic theorizing in general. At the same time, however, the complexity of systemic theorizing can be daunting, a fact that may in part explain the paucity of systemic theories of international relations.

<sup>&</sup>lt;sup>5</sup>Waltz's seminal *Theory of International Politics*, for example, remains a staple on graduate school field seminar syllabi, despite being over three decades old; Organski and Kugler's *War Ledger* and Gilpin's *War and Change in World Politics* are one and two years younger, respectively.

### **ADVANTAGES**

For example, if we imagine the world in the 19<sup>th</sup> century as it is often depicted by balance of power theorists—say, five Great Powers with roughly equal latent capabilities and citizens who think of security as the maximization of realized power—, the nested politics model implies that a balance of power will *always* occur eventually, *regardless* of the initial distribution of power, and will even re-establish itself if it is disrupted. Conclusions like these, even though they might seem counterintuitive, follow because the international system is a system, and as decades of research have demonstrated, systems in general have many unexpected and unanticipated qualities. One of these is that outcomes, like the balance of power, arise even though they may not be sought by any of the actors.

This particular inference leads to a more general question. What does the nested politics approach to understanding Great Power politics give us that others do not? What does it tell us about the world that we did not already know?

### Advantages

The signal insight to be gained from the book is an understanding of the process by which states simultaneously shape and are driven by the structure of the international system. In contrast to existing "top-down" (structural) or "bottom-up" (agentic) explanations, this one connects parsimonious models of the citizen, the state, and international structure to produce a coherent, dynamic, fully systemic model. Moreover, while existing systemic theories are often difficult to disprove, because they offer predictions that exclude few outcomes or set few limits on the time within which the theory suggests that they must occur, the nested politics model offers a formal model of a fully systemic theory and a statistical test derived directly from the model that permits its predictions to be evaluated precisely. The results demonstrate that the systemic model is on the whole quite successful with the data from the 19<sup>th</sup> and 20<sup>th</sup> centuries. One instance in which it is not, however, a relatively minor failure of the model,<sup>61</sup> is noteworthy mostly because it proves that the model actually *could* fail, unlike most difficult-to-falsify systemic theories to date—and in the overwhelming majority of cases it does not.

In addition, the ability of the model to predict states' levels of activity is a considerable strength in its own right. One substantial hurdle to theorizing at the systemic level in the past has been the fact that systemic theories' predictions about specific state activities, such as war and peace, alliance vs. armament, and so on, have been indeterminate.<sup>62</sup> But the conclusion that, because they cannot explain specific forms of state activity, they cannot explain anything at all at the state level, does not follow. Just as economic theories of supply and demand explain how much of a good con-

<sup>&</sup>lt;sup>61</sup>The argument that the distribution of regime types in the European system in the 19<sup>th</sup> century will respond to Great Power attempts to alter it is not supported by the data—a result, perhaps, of the inefficacy of Great Power attempts at regime change in that era, or of the relative strength of indigenous political movements.

<sup>&</sup>lt;sup>62</sup>Systemic theorists have been fairly open about this fact. Early efforts (e.g. Gulick 1955, Kaplan 1957) developed explanations of the nature of the international system without attempting to derive or test hypotheses about state behavior; later systemic theorizing embraces the idea of prediction but typically only at the systemic level.

sumers will consume but not how they will go about obtaining it, systemic theory can explain how actively a state will seek to increase its security but not the means by which it will choose to do so.<sup>63</sup>

The nested politics model demonstrates that systemic theories can make useful predictions about state behavior at a higher level of generality—foreign policy activity, ranging from essentially isolationist, at one end of the spectrum, to hyperactive or aggressive, on the other. Though underappreciated in the systemic theory literature, this understanding of state behavior has a long history in studies of foreign policy behavior<sup>64</sup> and attitudes<sup>65</sup> and parallels the logic of studies utilizing events data in the quantitative international relations literature.<sup>66</sup> Understanding whether states will pursue more or less active foreign policies, interesting in its own right, can also serve as the first stage in a more comprehensive, multi-level explanation of specific forms of state behavior. For example, I demonstrate in Braumoeller (2008) that the predicted values for state activity from the statistical model in Chapter 3 can be used as the independent variables in a second-stage, dyadic model of conflict onset based on deterrence theory; the same predicted values could easily be used in other studies to generate systemic explanations of other phenomena based on other ancillary theories.

Moreover, the nested politics model can inform the contemporary debate among different theoretical paradigms in international politics.<sup>67</sup> The spare logic of the model does not compel a focus on the *a priori* primacy of one determinant of security over all others.<sup>68</sup> The nested politics model can, however, serve as the framework for evaluating arguments about the security motivations and behaviors of states, in the same way that a general utility-maximization model can be used to evaluate arguments about the motivations of individuals once the sources of their utility have been specified.

Accordingly, in the third chapter I turn to an examination of the European Great Powers of the 19<sup>th</sup> and 20<sup>th</sup> centuries. The findings there and in the following chapter demonstrate that, during that time period, the balance of power consistently drove the Great Powers' security policies, *and* that those policies, in turn, were designed, in substantial part, to shape the balance of power. Moreover, it demonstrates that the balance of ideologies (or, more precisely, of political regime types) was also an important driver of Great Power security policy and was shaped by it as well during these periods. Finally, the realist counterargument that the model can be collapsed

<sup>&</sup>lt;sup>63</sup>Mearsheimer (2001, 11), for example, distinguishes between high-level theories such as his own offensive realism and more fine-grained theories like deterrence theory, arguing that only the latter predict war. In a recent summary, Wohlforth (2009, 28) points out, "[m]ainstream theories of war long ago abandoned the notion of any simple relationship between polarity and war."

<sup>&</sup>lt;sup>64</sup>See, for example, Klingberg (1952); Langer and Gleason (1952); Jonas (1966); Klingberg (1983); Holmes (1985); Schlesinger Jr. (1986); Nordlinger (1995); Gholz, Press, and Sapolsky (1997); Pollins and Schweller (1999); Legro (2000).

<sup>&</sup>lt;sup>65</sup>Holsti (1979); Wittkopf (1986); Wittkopf (1990); Murray (1996).

<sup>&</sup>lt;sup>66</sup>For a conceptual introduction see Schrodt (1994); for a prominent application in the security literature see Goldstein and Freeman (1990).

<sup>&</sup>lt;sup>67</sup>See especially Waltz (1959), Singer (1961), Waltz (1979), Moravcsik (1997), and Wendt (1999).

<sup>&</sup>lt;sup>68</sup>Realists have argued that anarchy compels a focus on power, but as historian Paul Schroeder (1994a) has pointed out, the historical record contains a far more diverse array of state behaviors than anyone could plausibly attribute to a desire for power.

to one in which only power explains outcomes is tested and conclusively fails. (For the sake of completeness, a similar test is conducted to determine whether only ideology could explain the model's outcomes. That argument, too, fails the test.) These findings will be of interest to international relations theorists, as systemic theory has generally been dominated by structural realism for many years. Moreover, the fact that realist arguments are evaluated in the context of a systemic model is critical: although some statistical studies of international relations theories have included a variable or two (like the balance of power) in their equations, the overwhelming majority are fundamentally dyadic in nature—a fact that permits structural realists to dismiss their findings as irrelevant.

These advantages are substantial (and, I hope, compelling). They are not, however, exhaustive. The logic of the theory itself implies some conclusions that run contrary to the conventional wisdom, and the integrated nature of the structural theory allows it to speak to the implications of changes in one "level of analysis" for phenomena at another level.<sup>69</sup> The logic of the model suggests, for example, that structural realism's insights about the formation of balances of power do not follow from its premises, though they can be made to follow with some additional premises; that the argument that Great Powers will choose a more restrained policy as their relative power declines (e.g. Wohlforth 1993) does not follow at all; that purely domestic theories of foreign policy, such as those that explain American isolationism between the two World Wars, may have to be revised; and that the logic of socialization, occasionally discussed in the constructivist literature, might actually be linked to balances of power. These points, which depend on a more detailed explanation of the logic of the model, are taken up at the end of Chapter 2.

# Plan of the Book

All of the nested politics model's advantages would amount to nothing, however, if it could not provide an account of Great Power politics that accords with the facts. Therefore, I devote the bulk of the book to a detailed empirical study of international security politics in the 19<sup>th</sup> and 20<sup>th</sup> centuries. My goal is to gauge the validity of the basic premises of the model as well as to flesh it out and determine the extent to which it accurately describes the political processes at work.

Chapter 2 describes the theory in more detail. It discusses the modeling philosophy that underlies the translation of the theory into a formal mathematical model, making the argument that a partial adjustment model is the most appropriate foundation for formalization. It then derives such a model, suitable both for simulations and for estimation, and describes the hypotheses that follow from it. Finally, it discusses the ancillary implications of the model for other theories of international relations. The first goal is to to explain the similarities and differences between the nested politics model and each of the other theories and show how the latter can be understood as special cases of the former. The second goal is to use the deductive structure of the nested politics model to illustrate, where possible, the logical implications of those

<sup>&</sup>lt;sup>69</sup>Waltz (1959); Singer (1961).

# Chapter 2

# System, State, and Citizen

# Introduction

This chapter contains a description of the theory of nested politics that will serve as a framework for the analysis of Great Power security policy throughout the remaining chapters. The heart of the chapter is a description of how the actors (states, and through them, citizens) shape the international system and how the system in turn influences the behavior of the actors. The core *explananda*, or dependent variables, of the theory are the distributions that constitute the structure of the international system—balances of power, ideology, and so forth—on the one hand, and the overall level of the state's security-related activity—ranging from isolationist to normal (for a Great Power) to hyperactive or aggressive—on the other. By explaining their reciprocal relationship to one another, the fundamental dilemma regarding the ontological priority of agents vs. structures can be mitigated.

The nested politics model is a model of the systemic mechanism that produces outcomes, rather than an argument that their actions will be prompted by particular motives.<sup>1</sup> To paraphrase Wendt, international security is what states make of it, and what they make of it is, irreducibly, an empirical rather than a theoretical question.<sup>2</sup> That is not to say that the nested politics model cannot be used to help resolve questions about actors' motives, or about paradigms in international relations. Far from it, in fact. The final section of this chapter demonstrates that the theory's implications call into question some of the main conclusions of various other theories in the realm of international affairs, including realism, constructivism, and theories of foreign policy. And in the next chapter, where I construct a statistical model to test the theory, I explore the history of the Great Powers in the 19<sup>th</sup> and 20<sup>th</sup> centuries in order to assess their motives empirically. After finding that states reacted to and

<sup>&</sup>lt;sup>1</sup>Waltzean neorealism, by contrast, argues both that the most compelling level of analysis for students of international politics is the structural level, which is an argument about the mechanism, *and* that the actors are driven by concerns based on relative power, which is an argument about motive.

<sup>&</sup>lt;sup>2</sup>It would be ideal, if possible, to derive actors' motives from the nature of the mechanism, which Waltz clearly seeks to do; my position is that whether or not such a feat is possible is an empirical question, and the empirical results in the next chapter suggest quite strongly that it is not.

shaped balances of power and of political ideology (understood as distributions of political regime type), I then assess the counterclaim that the model could be reduced to one of the "special cases" that constitute it—that a model based only on the balance of power, or only on the balance of ideology, would do just as well with the data. The answer, quite conclusively in all periods, is that it would not. The important implication of this fact is that, for example, the realist claim that states' apparent pursuit of regime change is reducible to the pursuit of power cannot be supported by the evidence.

### Nested Political Authority

The basic explanation is straightforward and, I hope, relatively uncontroversial. First, I argue that each state's constituency—those citizens capable, by virtue of the state's institutional structure, of exerting selection pressure on the leadership, whether that state is democratic or autocratic (Finer 1997, 38-58)<sup>3</sup>—has a *worldview* that determines its interests in the security arena. Some constituencies are power-maximizers who seek empire; others seek security through trade or the spread of a sympathetic ideology; still others are free-traders who seek to lower trade barriers. In any case, those interests will determine the state's preferences over outcomes:

[A]ctors' interests represent their fundamental goals, which change little. ... Preferences refer to the specific policy choice that actors believe will maximize either their income or chances of reelection.... Interests are the stable foundation on which actors' preferences over policy shift as their situation and the policy area vary. (Milner 1997, 15, fn. 4)

Preferences determine how the state's constituency will react to the condition of the international system at a given time. Imperialists without empire will demand action; by contrast, ideologues whose belief system has taken over the world or free-traders in a world devoid of trade barriers will demand little or none. In short, worldviews constitute interests, interests are the foundation of preferences, and the combination of preferences and the state of the system determine the magnitude of the demands for action that are placed on the leadership by its constituency.

Next, the demands of the constituency are aggregated by the state's political system. Again, this should be a relatively uncontroversial statement: the aggregation of preferences is a large part of what states are designed to do. The process of aggregation often results in a process of distortion as well, so that the preferences of the few (or the one) can come to outweigh the preferences of the many, but this need not be the case. The details of this process of aggregation vary from one state to the next; nevertheless, it can be shown that under a relatively unrestrictive set of assumptions policy will be driven toward the ideal point of the average voter.

<sup>&</sup>lt;sup>3</sup>Finer, having surveyed thousands of years of different forms of human governance, is comfortable using the term in democratic and nondemocratic states alike, and I follow his usage. The international relations subfield is perhaps more familiar with the term "selectorate" (Bueno de Mesquita, Smith, Siverson, and Morrow 2003).

Next, political leaders receive their constituencies' demands and act on them, and their actions have repercussions in the international system. Because leaders usually hope to retain office for themselves or for their parties, they typically stray little from the path laid out by their constituencies (although they do try to influence the direction of that path). Their ability to implement the policies favored by their constituencies is limited by two things: the latent capabilities of the state, or the raw resources that the state's leaders can bring to bear, and the actions of the leaders of other states whose goals conflict with their own.

Finally, the actions of the various states change the condition of the international system: in the previous examples, they might produce a shift in the distribution of power, the spread of an ideology, or a reduction in trade barriers. Because the result of the states' actions may make the citizens of some states more satisfied and the citizens of other states less satisfied than they had been previously, a change in the condition of the international system has an impact on the desires of each state's citizenry—and the cycle begins anew.

The theory in its most basic form makes no assumptions whatsoever regarding the status of its building blocks or about their relationship to one another beyond what you have just read.<sup>4</sup> The details follow. The intuition and motivation for each of the three main parts of the model is included in the next three subsections. Each represents an intentionally general theoretical process in the spirit of a broader theoretical paradigm; the larger model draws them all together to forge a single systemic theory from the insights drawn from each of its constituent parts. The model is formalized in the subsequent section, after which some of its implications are derived and discussed.

### Citizen

The first element of the theory is the individual citizen. Such citizens, I argue, possess worldviews,<sup>5</sup> variously described as their "belief system," the "prism" through which they views the international system, their "paradigm," "security paradigm," or "foreign policy paradigm."<sup>6</sup> Worldviews can also be thought of as the clusters of *issues* that matter to citizens, or as the *spheres* of international politics that are relevant

<sup>&</sup>lt;sup>4</sup>All of the basic elements of the model are taken to be variables whose values are measured rather than assumed. Frieden (1999) makes the case for deducing preferences from theory. Kimura and Welch (1998) argue that preferences, at least the ones that they examine, are idiosyncratic—they cannot be deduced from theory. They should therefore be measured, and "international relations theory should seek patterns and generalizations not among the inputs of state behavior, but in the ways in which states process those inputs." (214) I take something of a middle ground: preferences should be deduced from theory when possible, but the extent to which it is possible to do so cannot be determined without either invoking a Friedmanesque "as-if" clause and measuring whether behavior is consistent with posited preferences (Friedman 1953) or actually measuring the preferences themselves. I am more comfortable with the latter.

<sup>&</sup>lt;sup>5</sup>Fans of the term *"realpolitik"* may prefer the pleasant symmetry of *"weltanschauung,"* à la Bialer (1986, 264)—not to be confused with the *weltanschauung* of the well-known Sapir-Whorf hypothesis, which is heavily imbued with language.

<sup>&</sup>lt;sup>6</sup>Holsti (1962); Perkins (1993, 15), Ulam (1974, 347); Zubok and Pleshakov (1996, 4); Nation (1992, xiii); and Checkel (1997), respectively.

to them.<sup>7</sup>

The concept, as this list suggests, has appeared in the world politics literature in many forms, though each has slightly different connotations. The school most prominently associated with worldviews, perhaps, is social constructivism, which emphasizes the intersubjective nature of reality and therefore relies heavily on an understanding of the worldviews of individuals and states.<sup>8</sup> A considerable and diverse array of scholars interested in the power of ideas have also evinced considerable interest in the causal role of worldviews, without necessarily overtly aligning themselves with the constructivist camp.<sup>9</sup> Finally, to the extent that worldviews influence policy preferences (as I will soon argue they do), they could be claimed as a subset of liberalism.<sup>10</sup>

Most definitions involve constituent elements (generally norms, ideas, perceptions), their relationship to one another (as in beliefs about causal mechanisms), and their relationship to decision makers (as the means by which goals are defined, problems are pinpointed, and the proper means for solving problems and achieving goals are delimited).<sup>11</sup>

My conceptualization of a worldview encompasses only some of these elements. By a "worldview" I intend to connote the set of structured ideas that determine the dimensions of the structure of the international system that are deemed relevant to a state's security policy.<sup>12</sup> Citizens' need to restrict the dimensions along which they view the system exists because of the wealth of information that is potentially available about other countries: population, wealth, military strength, ideology, ethnic makeup, official language(s), religion, geographic area, average temperature and rain-

<sup>10</sup>Here see Moravcsik (1997); for a relevant application, Kimura and Welch (1998); and for an argument that liberalism and constructivism are indistinct, Sterling-Folker (2000).

<sup>&</sup>lt;sup>7</sup>I use the terms "issue" and "sphere" almost interchangeably; both refer to characteristics of the constituent units of a system that are deemed relevant to one another by virtue of their fundamental nature. The military sphere, for example, involves the military capabilities (characteristics) of the states (units) within the international system, which are relevant to one another by virtue of their nature (as vehicles for the projection of, or defense against, physical force outside of the boundaries of the state).

<sup>&</sup>lt;sup>8</sup>Here see, *inter alia*, the essays in Chafetz, Spirtas, and Frankel (1999), Katzenstein (1996), and Ruggie (1998), as well as Doty (1993), Erikson (1968), Hopf (2002), Johnston (1995), Laitin (1998), Richter (1996), and Wendt (1999); for a review see Checkel (1998).

<sup>&</sup>lt;sup>9</sup>One might quite reasonably categorize Axelrod (1976) as a tacit constructivist, especially given the evolution of cognitive mapping evinced in Johnston, previous footnote. Students of belief systems, such as Chittick, Billingsley, and Travis (1995), Converse (1964), Holmes (1985), Holsti (1979), Huntington (1993), Jervis (1970), McCloskey (1967), Murray (1996), Schneider (1983), Wittkopf (1990), and Zimmerman (1969), also qualify. If the category can be stretched to include anyone who demonstrates a generic commitment to the power of ideas, adherents become legion.

<sup>&</sup>lt;sup>11</sup>My formulation draws on all of the above sources, but most directly on Checkel (1997), who defines a foreign policy paradigm as "an interpretive framework of ideas and norms that specifies the nature of the problems decision makers face, the goals of policy, and the sorts of instruments that should be used to attain them." (p. 103)

<sup>&</sup>lt;sup>12</sup>Goldstein and Keohane (1993) break beliefs down into three types: world views, principled beliefs, and causal beliefs. World views are the broad ideas which make up the fabric of a society, while principled beliefs are normative ideas and causal beliefs are, quite simply, beliefs about causation. My definition of a worldview, in contrast to theirs, encompasses the latter two types. For example, a classical *realpolitik* worldview also contains principled beliefs (military security of the state is the primary value to be upheld) and causal beliefs (imbalances of power increase the probability of war, which in turn threatens the security of the state).

fall, collective tastes in arts and literature, fashion, etiquette. Very few of these dimensions are generally thought to be relevant to security policy, and citizens of different states may come to different conclusions about which are and which aren't.

Regardless of one's position on the question of which issues predominate, however, all general explanations of international relations must assume that *some* issues matter and some do not; no theory could be tractable otherwise. Which issues actually *do* matter, and how much they matter, are factual questions, however, and I will deal with them as such rather than join one theoretical camp or another.

Whichever dimensions are emphasized, a worldview provides citizens with a means of simplifying and interpreting international relations by giving them a lens through which to view other states and identify the salient divisions among them. International relations will then be understandable primarily as relations among states differentiated by such attributes as military capabilities, control of the means of production, democracy, religion, ethnicity, or, more broadly, culture.<sup>13</sup> These "issue dimensions" play a large role in interpreting actions: bombing one group of people might be more justified than bombing another to the same citizenry, largely because the targets of the first bombing were perceived as a threat, were doing something odious, or were simply living their lives in a manner which was *de facto* unacceptable. Hence, the Irish Republican Army feels justified in bombing the British, though not (say) the French.

Citizens rarely develop an interest in an issue dimension without deciding, in the process, that the world would be a better place if it could be nudged toward a particular point along that dimension. Few citizens who focused on the Cold War clash between democracy and communism, for example, were indifferent between the two: most could tell you what the structure of the system would look like if they had their way. The most-preferred state of the world along a given issue-dimension for any citizen is called that citizen's *ideal point*. Moreover, all issues are not equally important to all citizens of all states: on some issues, a wide range of outcomes would be acceptable (that is, the citizenry is relatively indifferent regarding outcomes), whereas on others, only a narrow range of outcomes would be tolerated. This difference constitutes variation in the *salience* of the issue-dimension to the citizen in question.

The collection of such ideal points, weighted by salience, constitute the state's *preferences*.<sup>14</sup> To a state driven by an offensive-realist worldview,<sup>15</sup> increasing the state's military capabilities relative to those of the other states in the system is in its

<sup>&</sup>lt;sup>13</sup>Scholarly research often mirrors these ideological predilections, suggesting that, even if scholars themselves don't view the world in these ways, they believe that a substantial proportion of humanity does; see Lenin (1939), Russett (1993), Hero (1973), Said (1977), and Huntington (1996), respectively, for examples. Broader models based on attribute-distance have been viewed, perhaps justifiably, with considerable skepticism since Wright (1942), but more recent applications (Altfield 1984; Axelrod and Bennett 1993) have shown more sophistication and promise.

<sup>&</sup>lt;sup>14</sup>The assertion that preferences follow from interests is widely but not universally accepted. Kratochwil (1982, 5-6), for example, argues that "we can think of cases in which it makes sense to distinguish carefully something wanted or desired—like sitting down in a snowstorm due to exhaustion—from the interest involved—not doing so because of the danger of freezing to death." It seems to me that there are actually two interests here (rest and survival) and two preferences that stem from them (sitting and not), and that the latter simply outweighs the former. See Keeney and Raiffa (1993) for a discussion of multiple preferences that would accommodate such an example.

<sup>&</sup>lt;sup>15</sup>The distinction between offensive and defensive realists will be discussed in detail below.

interest; an ideologically-driven communist state's interests consist of changing the correlation of forces in favor of world socialism.<sup>16</sup>

The present status of the world along the dimensions emphasized by the citizenry's worldview and the citizenry's preferences determine the citizens' collective demand for action. The farther the present structure of the system is from the state's ideal point and the greater the salience of the issue, the greater the citizenry's level of dissatisfaction, and the greater its desire for action to redress the present situation. Note the use of the word "present": the citizenry is not entirely certain about the impact that the state's behavior will have on the future structure of the system. Moreover, because the constituency is radically less certain about the worldviews and capabilities of other states than it is about its own, it cannot anticipate either the impact of the structure of the system on the level of activity of other states or the subsequent impact of those states' activity on the system's structure. The constituency is also secure in the knowledge that other states will engage in incremental policies, for the same reasons that it knows that its own state will do so; moreover, given its much greater level of uncertainty about other states' worldviews, intended actions, effects of those actions on the status quo, etc., the constituency typically does not make any substantial demand that leaders attempt to counter the imagined future actions of other states, preferring instead to wait until those actions have had an impact and counter them then, if necessary. For all of these reasons, the citizenry opts for a strategy of "partial adjustment," or incremental change, demanding smaller amounts of activity than would be warranted under conditions of complete certainty.<sup>17</sup>

There is an important dynamic element to this relationship over time: to the extent that the state succeeds in getting what its citizens want, demand for further action is reduced. Those states wishing only to "make the world safe for democracy" could, absent the threat of backsliding, largely pack up and go home once they had accomplished their goal. Few states are afforded this luxury, however, because the system typically contains at least one more sufficiently capable actor whose goals conflict with those of the state in question.

In any case, the implications arising from this perspective are reasonably straightforward: changes in citizens' worldviews, reflected either in the salience that they assign to the dimensions of the world that they deem most relevant to security or in their ideal points along those dimensions, produce policy change.

<sup>&</sup>lt;sup>16</sup>It is worth noting that this conceptualization of interests accords with that of theorists but clashes with that of many policy makers. To the latter group, "the national interest" is often used to refer to a minimalist set of goals consistent with defensive realism—i.e., defense of the homeland in the short term, prevention of developments abroad that might present a threat to the homeland in the longer term, and minimization of loss of life. The contrast can be highlighted by considering the general case of humanitarian interventions, which would be based on the nation's interests according to academics if the impetus to engage in them stemmed from the worldview that motivates the state's security activity, but which would not be in the national interest according to policy makers because humanitarian crises pose no threat to the nation and intervention risks lives.

<sup>&</sup>lt;sup>17</sup>This argument is laid out more formally and in more detail in the Model section of this chapter.

### State

The manner by which the ideational predispositions of the citizenry of a state coalesce into something that might be called the state's collective preference is a matter of considerable debate. Rarely since the disappearance of the Greek *agora* have demands been expressed directly by the citizenry, and the process of preference aggregation one of the most fundamental functions of any political system—must be understood as well. This is the traditional redoubt of the liberal paradigm in international relations theory,<sup>18</sup> and of public choice theory in the formal political theory literature.

The conclusions reached by public choice theory are famously grim. The Marquis de Condorcet (1785) was among the first to point out that three voters (or groups) facing policy options A, B, and C and possessing preference orderings A > B > C, B > C > A, and C > A > B could not be said to have a single collective preference: any option forwarded can be defeated by another option that is preferred by two of the three voters. Kenneth Arrow (1951) generalized this point by demonstrating that, under a fairly innocuous set of assumptions,<sup>19</sup> no system of preference aggregation other than dictatorship-in which one person's preferences determine society's-can avoid this conundrum.<sup>20</sup> Worse, as Charles Plott (1967) suggested and Richard McKelvey (1976) demonstrated, in a majority-rule contest in the absence of an "undominated point" (a policy that cannot be defeated by any other), any policy at all can be reached by constructing a sequence of proposals, each of which is preferred to its predecessor by a majority of the voters. When politics involves more than a single issue dimension, politicians can garner support from shortsighted voters by finding an "issue niche"-a narrow range of policies that a majority of voters will find (barely) preferable to the alternative that has been proposed.

The unfortunate implication of McKelvey's insight for students of politics is that predicting the relationship of preferences to policy from first principles becomes a very tricky business. Duncan Black's (1958) claim that the preference of the state along a given issue dimension reduces to the preference of the median voter no longer holds when multiple dimensions come into play.

This conclusion, however, is premised on a very brittle set of assumptions about the behavior of voters (or, more accurately, about the perceptions of leaders regarding the behavior of voters). Constituents are assumed to know precisely where each

<sup>&</sup>lt;sup>18</sup>For a detailed review and canonical statement of the modern liberal paradigm see Moravcsik (1997).

<sup>&</sup>lt;sup>19</sup>Roughly, they are as follows: 1) The number of alternatives must be at least three; 2) any set of individual orderings should be possible, and the system of preference aggregation should be able to specify a social ordering for any set of individual orderings [collective rationality]; 3) if all individuals prefer A to B, then the resulting social preference ordering should include a preference for A over B [the weak Pareto criterion]; and 4) if A is universally preferred to B, then changing the order of any additional alternatives should have no effect on the collective preference for A over B [the irrelevance of independent alternatives].

<sup>&</sup>lt;sup>20</sup>It is worth emphasizing that the implications of Arrow's insight are not as horrific as they might at first seem. Arrow did not argue that democratic government was inherently dysfunctional, or that dictatorship is desirable; rather, the proof demonstrates that in every form of government other than pure dictatorship the *possibility* of deadlock is unavoidable. To offer a trivial counterexample, if three groups' preferences must be aggregated and all have preference orderings A > B > C, aggregation in a democratic system is easy. In fact, out of all of the permutations possible in the context of the three-voter, three-issue example offered by Condorcet, only 5.6% lack a majority winner.<sup>21</sup>

candidate stands on each issue and how much utility they would receive if that stance were translated into policy; moreover, they are assumed to support the candidate whose stance provides a marginally greater expected utility with probability 1. The candidates are assumed to know that they will do so.

It is more realistic to argue that uncertainty exists, both on the part of the constituency about the benefits of the candidates' platforms and on the part of the candidates about the behavior of their constituents. Constituents may be ill-informed; candidates might not be able to count on their support even if they were because they may be incorporating idiosyncratic factors into their decision calculus. The assumptions adopted in the nested politics model reflect this uncertainty. Constituents are assumed to support a candidate with a probability that increases as the candidate's platform's utility to them increases and decreases as the candidate's opponent's platform's utility to them increases. In short, this means that, as the attractiveness of Smith's policies increase, the probability that I will vote for Smith increases as well. I may not be likely to support Smith over Jones even if Smith's policies would be better for me—perhaps I am not perfectly informed about their policies; perhaps I have watched the debates and Smith just strikes me as a fool—but as the difference between Smith's policies and Jones' increases from my point of view, so too will the probability that I will vote for Smith I will vote for Smith the

Under these conditions, it becomes possible to say something more concrete about the relationship of leaders' policies to their constituents' preferences. The uncertainty surrounding constituents' behavior smooths out the relationship between candidates' positions on the issues and the support that they receive, making it impossible for leaders to find "issue niches" that afford a temporary advantage. Instead, a single optimal position emerges.<sup>23</sup> Under the relatively general assumptions described above, this position is the one that maximizes the mean of the constituents' utilities.<sup>24</sup>

It is important to bear in mind that, by virtue of the fact that leaders must constantly gauge its temper and adjust their policy in order to maximize support, a constituency can place "demands" on the leadership without ever uttering a word. Just as the course of a lightning bolt is determined entirely by tiny differences in resistance among the countless air molecules that surround it, a constituency that makes no actual policy demands whatsoever but merely reacts to policies as they are enacted (or debated) guides politics along the path of least resistance. Although this form of passive compellance is most apparent in democracies in the modern age of nearinstantaneous public opinion polls, it is an inherent feature of government, however large or small the constituency.<sup>25</sup> The worldviews of constituencies shape the policies

<sup>&</sup>lt;sup>22</sup>This is a very "vanilla" probabilistic voting model, meant to apply to a wide range of states. Quite a few additional nuances, such as interest groups, ideology of voters, etc., have been added to explain the features of different electoral systems (see Persson and Tabellini (2002) for examples), but the basic model seems most well-suited to describing features common to political systems in general.

<sup>&</sup>lt;sup>23</sup>As it happens, this position is the one that is optimal for the entire community—at least by the standards of Jeremy Bentham, who wrote in Chapter 1 of *Principles of Morals and Legislation* (1823) that "[t]he interest of the community then is...the sum of the interests of the several members who compose it."

<sup>&</sup>lt;sup>24</sup>Mueller (1989, 199-202).

<sup>&</sup>lt;sup>25</sup>John Zaller (1992) has developed a model of opinion formation in which elites are drawn from subpopulations with different ideological predispositions, specialize in policy formulation, and send "messages"

of elites, not by any direct form of coercion, but passively—by virtue of the fact that satisfying one's constituency also happens to be the best way to get into office and stay there.

Once in office, of course, leaders are potentially capable of having some influence over the preferences of their constituencies as well. The magnitude of this influence, however, is highly variable, both across and within political systems. Its extent is most likely greater in authoritarian systems, where a "circular flow of power" (Roeder 1993, 27-29) ensures a degree of codependency between leaders and constituencies, than it is in representative ones. Even so, two points mitigate in favor of the standard, bottom-up public choice model of constituent influence: one, the flow of power does come full circle, in that leadership pressures on constituents hardly negate the impact of constituents on leaders (to, for example, Khrushchev's dismay); and two, the strength of leaders' influence over constituents varies substantially even within a given political system. Taken together, these points suggest that the backward flow of authority from leader to constituent is neither strong enough nor regular enough to constitute a regular feature of the model, but that it may merit our attention in individual cases. (Indeed, I will argue in Chapter 4 that this ability played a prominent role in allowing Mikhail Gorbachev to modify his constituency and escape the straitjacket of Soviet orthodoxy when attempting to improve relations with the United States.)

To sum up the theory so far: Each constituent's tacit demands are based on a comparison of his or her own ideal point to the present condition of the structure of the international system along his or her own favored dimension(s). The utility of a foreign policy action to a constituent is calculated as a weighted average of its benefits in whichever spheres are emphasized by that constituent's worldview. The preferences of the individual citizens are then aggregated and passed along to the leadership. Because the leadership wishes to maximize its support, it implements a policy designed to produce the greatest good for the greatest number, which implies a policy close to the mean along every issue dimension.

Making allowances for differences in domestic institutional structure, a process very similar to this one takes place in all political systems. That said, however, the particulars of this process vary greatly from one state to another, and not all citizens are capable of influencing leaders: a constituency is merely that segment of the citizenry that exerts selection pressure on the leadership. One of the functions of the state is to determine how the constituency is defined; variation in the domestic structure of the state can enfranchise different groups of citizens to different degrees. Though area specialists may argue over precisely which segments of society have how

in the form of policy statements back to the public via the media. These messages, when received, resonate most strongly in citizens with sympathetic predispositions. Voter opinion is therefore seen as a function of attentiveness, predispositions, and the strength of the message (as well as of any events in the international arena that happen to make one issue or another particularly salient). To win elections, candidates must adopt clusters of policies that resonate as strongly as possible with the subpopulation that constitutes their base of support. These themes are elaborated throughout the book and are neatly captured in Zaller's "Parable of Purple Land" (pp. 311-312). The model is essentially a simple version of a spatial theory of voting in which the population's preferences in issue-space are bimodal and candidates are drawn to the modes. A vast literature exists on this subject; for a review and an excellent example see Enelow and Hinich (1984).

much power to affect policy, examples of leaders without constituencies are exceedingly hard to find. The existence of a constituency in non-democratic states may not be obvious at first, but enough leaders have been overthrown (or killed) in even the harshest totalitarian states that it cannot be discounted.<sup>26</sup> At a minimum, leaders heavily protected from the public must rely on the fealty of their protectors.

Regardless, though, this process points to an important source of policy change: changes in the preference-aggregation mechanism of the state itself, as (for example) might occur when the franchise, representational mechanisms, or institutional decision rules change.<sup>27</sup>

### System

Finally, once a state's collective preferences have coalesced and the constituency has issued a demand for action on the part of the leadership, leaders must choose a level of security activity for the state. While positions on domestic economic matters often boil down to taking a stand on the question of how much should be given to (or taken from) whom, in the case of foreign affairs leaders must choose how active the state will be in pursuing the constituents' desiderata-how hard to work to maintain the balance of power, perhaps, or how much effort to expend in fomenting revolution abroad. Inactivity on the part of leaders in the face of demands for action will be penalized because it will be viewed as neglectful of the national interest. Activity in excess of that demanded by the constituency will be penalized because it will be viewed as a diversion of resources away from more important tasks.<sup>28</sup> The leadership is assumed to be free to take whatever level of action it chooses, though the extent to which leaders' actions are effective is limited both by the potential capabilities of the state and by the actions taken by the leaders of other states. This is the essence of the realist paradigm in international politics: states utilize their power in order to get what they want, to the extent that they can.

A situation of this sort—one in which a continuum of possible strategies exists and leaders must choose a level of activity that will result in a division of the system that maximizes their payoffs subject to the constraints imposed by the behavior of other leaders—is referred to generically as a "bargaining problem," in deference to its roots in economics, though the moniker is certainly appropriate to the kinds of secret negotiations in smoke-filled rooms that the word "*realpolitik*" conjures up. The idea is that multiple actors know one another's preferences and capabilities and, with or without actual collusion, they have to arrive at a state of the world in which no one has an incentive to change his or her behavior. A classic example is that of a duopoly in which two firms must choose a level of production of a particular good without producing too much and eliminating demand. One very straightforward way to solve a problem of this sort is to find a Cournot-Nash equilibrium that will describe both

<sup>&</sup>lt;sup>26</sup>Even Hitler narrowly escaped an attempt at extreme selection pressure on July 20, 1944, when Colonel Claus von Stauffenberg's briefcase bomb narrowly missed its target.

<sup>&</sup>lt;sup>27</sup>For an excellent review of the different dimensions of the foreign policy implications of such changes see Rogowski (1999).

<sup>&</sup>lt;sup>28</sup>Examples in the American context abound; for a recent example see Gholz, Press, and Sapolsky (1997).

equilibrium levels of activity and distribution of (realized) capabilities.<sup>29</sup>

The problem with such a general-equilibrium model as a description of reality in this case is that it describes equilibria but not how those equilibria are achieved, starting from initial conditions. If the system were to reach a general equilibrium immediately and that equilibrium were to adjust itself instantaneously to any perturbation, the Cournot-Nash bargaining solution would be a perfectly serviceable tool for understanding the outcomes of such bargaining situations at the international level. Unfortunately, adjustment to changes, either in worldviews (and hence preferences) or in capabilities, might take years to accomplish, and in that time other changes occur elsewhere in the system that often require further adjustments, and while those adjustments are taking place, still more changes occur, and so on, and so on. If changes in the determinants of equilibria are frequent and adjustment takes time, states can spend most of their time equilibrating-out of equilibrium but moving toward it. Because bargaining solutions like the Cournot-Nash model tell us where states are going but not how they get there, and because much of history consists of getting there, we need a model of the process by which they arrive at an equilibrium, not just a description of the equilibrium itself.<sup>30</sup>

Here, leaders adjust the state's level of security activity at any given moment to mirror the level of activity demanded by the constituency. The net result of the actions of the leaders of all states is a change in the structure of the system. Once that change has occurred, the cycle of activity begins anew: the state's citizenry observes the structure of the system through the prism of its worldview, it makes demands on its leaders, those demands are aggregated, leaders act on them, those actions collectively have an impact on the structure of the system, and so on. Citizens do not consciously equilibrate; that is, they make no detailed calculations about the results of their states' actions in combination with the actions of other states. They merely respond in a very straightforward way to the stimuli provided by the system by demanding action in proportion to their dissatisfaction. This model of how states act tells us how they get to equilibrium and how they should be expected to act when they are not there.

In any event, the impact of the state's activity will depend in a straightforward manner on the resources that it can bring to bear in an attempt to change the status quo. Because one dimension of the structure of the system that states often seek to alter is the balance of power, and the resources that they utilize in order to change it are also often referred to as power, we must make a distinction between latent and realized capabilities (or power) if the rest of the theory is to be conceptually coherent. One of the ways in which a state can have an impact on the system, as mentioned above, is by arming itself unilaterally, thereby increasing its realized capabilities weaponry, transportation capabilities, intelligence resources, and so on. Its ability to do so is determined by its latent capabilities—the human, material, and technological

<sup>&</sup>lt;sup>29</sup>See Rasmusen (1989, 76-78) for a clear discussion of the Cournot-Nash equilibrium concept.

<sup>&</sup>lt;sup>30</sup>Advocates of the Nash bargaining solution will nevertheless be pleased to know that the variant of the model that permits no joint gains produces equilibrium results, in the long run, that are equivalent to the results of an asymmetric Nash bargaining model, which—as Binmore (1998, 126-128) shows—is also the solution to the Rubinstein bargaining model (Rubinstein 1982) as the response time grows vanishingly small.

resources that can be devoted to the task. Latent and realized capabilities must be distinguished from one another both in order to avoid tautology and because they play different roles in the theory: realized capabilities determine the state's place in the international power hierarchy and are most relevant to the maintenance of international stability, whereas latent capabilities, which capture the state's long-run or potential strength, are what permit states to alter the balance of realized capabilities, as well as to achieve lasting changes in other structural dimensions.<sup>31</sup>

### Security-Related Activity

The activity that states engage in in order to increase their security requires a bit of elaboration. Security-related activity denotes the expenditure of resources in an attempt to change the status quo and thereby to increase the national security of the state. Resources may be real or promised, the latter merely being a conditional version of the former (a defensive alliance, for example, is an expenditure of military resources conditional on an attack on one of the member countries). Examples include increases in arms levels, the formation of alliances, and the issuances of threats.

Although forces operating at the level of the international system prompt the state to pursue a more or less active foreign policy, they typically do not compel any particular *form* of activity—the taking up of arms rather than the formation of alliances, for example.<sup>32</sup> The system provides the impetus to act; other considerations at different levels of analysis (typically, theorists have argued, the relative costs and benefits of each form of activity)<sup>33</sup> determine the form that that action will take.

This is the narrow sense in which I agree with Kenneth Waltz's famous argument that systemic theories are not theories of foreign policy.<sup>34</sup> Waltz's reasoning on this point is neither entirely consistent nor entirely compelling: for example, the argument (1979, 119) that systemic balances can be predicted with great certainty but the individual state behavior that produces them is entirely indeterminate is logically tenuous. Nevertheless, when Waltz (1996, 54) writes that a theory of foreign policy, unlike a systemic theory, "would explain why states similarly placed in a system behave in different ways," he captures the essence of a crucial distinction: while systemic theories *must* be able to predict that states will act, if only because they must do so in response to structural incentives, systemic theories cannot predict the exact *form* that that action will take. The first part of Wolfers' (1962, 13-14) "burning house" analogy captures this intuition well: individuals caught in a burning house will be compelled to exit. But, importantly, the existence of the fire tells us nothing about *which* exit they will choose. Accordingly, as Wohlforth (2009, 28) points out, mainstream theories of conflict have long since abandoned the idea that there is a

<sup>&</sup>lt;sup>31</sup>For an elaboration of the latter position, to which I am in considerable debt, see Organski and Kugler (1980). The authors define the international hierarchy in terms of GDP; my own preference, as subsequent sections will demonstrate, is to utilize a combination of urban population and iron and steel production.

<sup>&</sup>lt;sup>32</sup>It could be argued that bipolarity compels a greater degree of armament than alliance, for example, but even so alliances can play a prominent role, as NATO and the Warsaw Treaty Organization demonstrated during the Cold War.

<sup>&</sup>lt;sup>33</sup>See, for example, Conybeare (1994), Morrow (1993), and Sorokin (1994); for an arms-alliances argument that does build on a very different systemic logic than the one elaborated here see Saperstein (1992).

<sup>&</sup>lt;sup>34</sup>See e.g. Waltz (1979, 121), Waltz (1996).

direct relationship between structural configurations and such specific actions as the initiation of conflict.

Explaining which specific form of activity will be chosen by a state can, however, be accomplished if systemic theories are augmented with additional, typically non-systemic, theory. Elsewhere I demonstrate that the systemic model developed herein can be successfully married to a dyadic theory, deterrence theory, to create a comprehensive explanation of the onset of conflict.<sup>35</sup> This is but one example of the manner in which the logic of the theory can be augmented with auxiliary theory from different levels of analysis to predict more specific behaviors on the parts of states and dyads. Alliance vs. armament, the initiation and termination of arms races and enduring rivalries, conflict and cooperation, all are plausible extensions but each has its own logic and merits careful explication. In addition to being of substantive interest in its own right, therefore, the systemic theory can serve as a first stage of a more diverse array of more comprehensive explanations of specific foreign policy phenomena.

The relative abstraction of the notion of state foreign policy activity, when compared to specific forms of activity such as arming and forming alliances, may have obscured this point to international relations theorists. However, the study of securityrelated activity in general, in the form of "events" data, has a long pedigree in quantitative international relations scholarship,<sup>36</sup> where it is studied alongside phenomena like alliances and arms races without any sense of contradiction. Events data are a systematic attempt to categorize the (typically) security-related activities of states on a unidimensional scale. Events data scales typically range from most conflictual to null to most cooperative. Because the system compels action rather than cooperation or conflict *per se*, the more useful conceptualization here is a spectrum ranging from most inactive (essentially, isolationist) to normal (for a Great Power) to hyperactive or, in the case of conflictual activity, aggressive.

The activity of Great Powers in the modern era takes place, broadly speaking, on two levels. The first has to do with everyday *interactive* politics—commercial and legal interactions, territorial disputes, imperial rivalries, and so on. The second level is *regulatory:* it is a (usually explicit) attempt to create an international system that will prevent the frictions generated at the first level from escalating to major war. Similar forms of regulation take place in human societies when, as is almost always the case, people realize that their interests will clash from time to time and agree to set up some form of mechanism (judicial, executive, legislative) at the meta-interaction level to defuse the resulting conflicts. This sort of self-interested regulation is not uncommon and varies widely in degree of complexity, from the evolution of cooperative norms<sup>37</sup> to what international relations specialists call "regimes,"<sup>38</sup> all the way

<sup>&</sup>lt;sup>35</sup>(Braumoeller 2008). See also (Fearon 1998) for a thought-provoking essay on theoretical bridges between the systemic level of analysis and other levels, though most systemic theorists would most likely focus only on the second of Fearon's two definitions of systemic theory, and only if it specifically implicated the structure of the international system as a motivating force.

<sup>&</sup>lt;sup>36</sup>See e.g. Azar (1982), Goldstein and Freeman (1990), Merritt, Muncaster, and Zinnes (1994) and Pevehouse and Goldstein (1999).

<sup>&</sup>lt;sup>37</sup>Axelrod (1984), Oye (1986).

<sup>&</sup>lt;sup>38</sup>Keohane (1983), Keohane (1984), Krasner (1983).

to formal political institutions.<sup>39</sup> Activity designed to alter the structure of the international system is often, even usually, regulatory political activity, though it need not be (as in the case of a pure balance-of-power system with no attempt at regulation or coordination).

The effects of a state's security activity will mirror the blend of issues that constitutes its worldview. Ideological states will act to promote their favored ideology abroad; *realpolitik* states will work to disrupt strong (and therefore potentially dangerous) coalitions; and so forth. The actions of a mostly-ideological state might nevertheless have some *realpolitik* impact: its primary goal might be to reproduce its ideology abroad, but if its worldview is at least somewhat informed by power-politics concerns it will tend to a lesser degree to enact policies that enhance its military security.

Despite the fact that leaders have a strong incentive to act as their constituencies demand, and despite the fact that many of them are in control of sufficient resources to bring about whatever changes their constituency desires, states rarely achieve their goals: few ever reach their constituency's ideal point, whether that be hegemony, religious or ideological unification, or what have you. Most are doomed to some degree of frustration by virtue of the fact that other states with other worldviews also exist and are also attempting to exert their own influence over the international system. The results can range from minor and occasional conflicts of interest to sustained competition to war.

There tends to be considerably more change in the qualitative nature of regulatory politics after each systemic war or conflict than there is at any time during the subsequent peace. This fact has led theorists like Ikenberry (2000) to focus on the nature of the world order between wars as a phenomenon of interest. This work follows in that tradition. Like Ikenberry, it focuses on periods between wars as discrete periods with their own logic; a substantial difference between the two is that this work relies on a more general understanding of the mechanisms of regulatory politics, comprising not just formal political institutions but also political regimes in a more general sense.<sup>40</sup>

# Modeling: Background and Principles

As early as 1874, Léon Walras had conceived of a notion that would evolve into what is now known as general equilibrium theory.<sup>41</sup> The motivation for general equilibrium theory corresponds quite closely to the motivation for systemic IR theory, namely, that the behavior of one actor has an impact on the behavior of the rest.

<sup>&</sup>lt;sup>39</sup>Axelrod and Keohane (1986), Keohane (1989), Ikenberry (2000).

<sup>&</sup>lt;sup>40</sup>More specifically, Ikenberry (2000, 13-16) contrasts his liberal institutional perspective with two others: a neoliberal, or "unsticky," perspective, and a constructivist one in which institutions are "diffuse and socially constructed worldviews that bound and shape the strategic behavior of individuals and states" (15). The perspective on offer here may be closest to the latter, constructivist one. Moreover, while Ikenberry's focus is on the reasons for the stability of world order (or lack of it), those concerns are not especially central here.

<sup>&</sup>lt;sup>41</sup>I am indebted to David Lake (private communication) for the suggestion that I explore general equilibrium theory as a body of work relevant to my own thinking about the international system.

### THE MODEL

it, that they delivered it up to the Inclemencies of Sun and Winters. In the Deserts of the West, still today, there are Tattered Ruins of that Map, inhabited by Animals and Beggars; in all the Land there is no other Relic of the Disciplines of Geography. (Borges 1998, 325)

The lesson, of course, is that beyond a certain point the complexity of a model makes it uninteresting as a description of reality: as it approaches the complexity of reality itself, its value disappears. Macroeconomists' quest for accurate models of the national economy has driven them to posit ever-larger systems of equations, with hundreds or even thousands of equations.<sup>54</sup> Political scientists, driven more by the desire to understand the international system than by a desire to capture every last hiccup in every time series, would do well not to emulate such theoretical fecundity, lest they meet the fate of Borges' geographers. Clarke and Primo (2005, 10, 13) make essentially the same point, with the same metaphor:

Maps, to borrow an example from Giere (1999), are models. Maps are not reality, nor are they isomorphic to reality. Maps are representations of reality. Furthermore, maps are physical objects, not linguistic entities. ... Maps are partial; they represent some features of the world and not others, and they are of limited accuracy.

Along these lines, Bankes (1993) suggests a philosophy of modeling suitable to the subject matter at hand: given that forecasting in social systems is an uncertain business at best, we should focus less on the use of large, comprehensive models for prediction and more on the use of small, exploratory models for improving our insights about the subject matter. This, it seems to me, is precisely the right approach: to generate models that are small enough that they can be readily comprehended by most specialists, yet complex enough that their workings illuminate something about the subject matter that would not have been readily grasped with unaided intuition. The purpose of such a model is to serve as an aid to the analyst's understanding of a given situation, a means of understanding the likely implications of changes in the world and a testbed for fine-tuning that understanding.

This more proscribed, less ambitious, but ultimately more satisfying modeling exercise is perfectly suited to the dynamics of the international system, in which the complexity of the interactions among states rapidly outrun unaided intuition. The next section describes a small, exploratory model designed to capture those dynamics, and the following sections briefly hint at its utility.

## The Model

In a world of N Great Powers (1, ..., i, j, k, ..., N) and M issue dimensions, or spheres of interest (1, ..., m, ..., M), let  $a_i$  denote the level of activity of state n and  $s_m$  denote state n's share of the system's resources in sphere m. s and a are the state variables. Also let  $c_{im}$  represent a frequency distribution of constituency ideal points for state n

<sup>&</sup>lt;sup>54</sup>Hickman (1991) traces the development of the multi-national Project LINK from its early days, when it comprised 1,500 equations, to 1985, when it was made up of about 20,000 (!)

on dimension *m*, and let  $v_i(\cdot)$  represent state *n*'s preference aggregation function.  $\omega_{im}$  represents the salience of issue-area *m* to the constituency of *n*—in other words, the degree to which changes in the distribution of goods relevant to issue *m* are deemed relevant to the national security of n.<sup>55</sup> Finally,  $\pi_i$  represents the latent capabilities of state *n*, or the resources it has available to convert actions into outcomes (scaled to  $0 \le \pi_i \le 1$ ).

Of these, only  $v_i(\cdot)$  is relatively complex. Debates have played out in the public choice literature for decades regarding how preferences can be aggregated without running the risk of deadlock or cycling, and many reasonable answers have been offered for specific legislatures or categories of legislatures, but few can reasonably be applied to governments as diverse as Reagan's America and Tsarist Russia. The most reasonable general representation is one in which constituents support leaders with increasing probability as policies approach the constituents' ideal points,<sup>56</sup> ideal points along one dimension are unrelated to ideal points along another, and leaders act to maximize their support.

Under those conditions, and assuming that probability distribution functions are continuous and strictly concave, the leader's governance problem becomes the maximization of  $\sum_{d=1}^{D} p_d$ , where  $p_d$  is the probability that constituent d will support the leader. If all constituents are not weighted equally—if, for example, a skewed electoral system gives more weight to some votes than to others—, the problem becomes the maximization of  $\sum_{d=1}^{D} w_d p_d$ , where  $w_d$  represents the weight accorded to constituent d. Similarly, if constituent 1 is more sensitive than constituent 2 to changes in policy, 1's preferences will carry more weight in determining the resultant policy than will 2's (Mueller 1989, 199-202). In the most generic case, that in which constituents are equally weighted,  $\sum_{d=1}^{D} p_d$  is maximized at  $\bar{c}_{im}$ , and because we assume for the sake of tractability that ideal points along one dimension are unrelated to ideal points along another,  $v_i(c_{im}) = \bar{c}_{im} \forall m$ , and  $v_i(c_i) = \bar{c}_i$ : the aggregated preferences of the constituency of n collapse to the multidimensional mean.

According to the theory, the constituency's worldview in state *n* determines both  $c_{im}$  and  $\omega_{im}$ . Domestic politics determines both the size and nature of the subset of the citizenry that is defined as the constituency and the particulars of the preference aggregation function (e.g., the weight vector w). In the modern era the state's available (or latent) power resources determine  $\pi_i$ .<sup>57</sup> These variables determine the values of  $s_m$  and  $a_i$  in equilibrium in the following manner:

<sup>&</sup>lt;sup>55</sup>Technically,  $\omega_{im}$  is a quantity that is aggregated from the constituency level to the level of the elite as well, so if we were being extremely explicit the notation would be  $v_i(\omega_{im})$  rather than  $\omega_{im}$ , or even  $\xi_i(\omega_{im})$  if we assumed a different aggregation function  $\xi_i(\cdot)$ . To avoid excess notation, and without loss of generality, I simply utilize  $\omega_{im}$ . <sup>56</sup>The assumption of probabilistic support, rather than a deterministic model in which constituents

<sup>&</sup>lt;sup>56</sup>The assumption of probabilistic support, rather than a deterministic model in which constituents support A over B with certainty if and only if their expected utility under A exceeds their expected utility under B, is fairly easy to justify in real-world terms. Constituents might be somewhat ignorant of the expected utilities of leaders' policies for them, or those policies might contain elements not captured by the model.

<sup>&</sup>lt;sup>57</sup>As I discuss starting on page 67, this relationship is historically contingent: In the 19<sup>th</sup> century, states on balance were more concerned with the balance of latent capabilities and altered them utilizing realized capabilities. During that period, therefore, *realized* capabilities determine  $\pi_i$  and *latent* capabilities determine *s*.

### THE MODEL

 $\omega_{im}$  determines the extent to which dimension *m* matters to state *n*. Given that it is difficult and costly to change the state of the world,  $\omega_{im}$  captures the extent to which the state is willing to expend resources in order to bring about change in that dimension. Following Sargent (1978), the existence of costs of adjustment implies that adjustment will be partial rather than immediate, i.e., that constituents will not simply demand a jump to equilibrium in the manner of standard rationalexpectations models.<sup>58</sup> If  $\omega$  is high, the dimension in question is very important to the state, and costs will be low, in the sense that constituents will not object to very substantial expenditures of resources.<sup>59</sup> Accordingly, adjustment will be more rapid than it would be if  $\omega$  were low.

 $v_i(c_{im})$  can be thought of as state *n*'s collective "ideal point" along dimension *m*, and  $s_m$  constitutes the "state of the world" along that same dimension. Constituents demand action from the leadership in direct proportion to the extent that *m* matters to *n* and that the state of the world diverges from their collective ideal point. Leaders maximize their domestic support by acting to satisfy their constituency. The demands of their constituency are based on the distance between the collective ideal point and the status of the system and the emphasis placed on that dimension of reality by the state's worldview, or  $\omega_{im}$ .

It is desirable to have the level of activity be the same whenever the state of the world  $s_m$  is a given absolute distance from state *n*'s ideal point. Therefore, the simple distance between the ideal point and the state of the world,  $v_i(c_{im}) - s_m$ , will not serve well as a component of the equation, simply because it does not possess this quality: it would produce "negative activity" whenever  $v_i(c_{im}) < s_m$ , and aside from the conceptual unpalatability of such an outcome, empirically determining whether activity is designed to move the status quo upward or downward toward a state's ideal point would sometimes be very difficult. Using  $|v_i(c_{im}) - s_m|$  would ameliorate this problem, but absolute values possess undesirable mathematical qualities, especially as regards estimation. The most straightforward function that possesses the key qualities of  $|v_i(c_{im}) - s_m|$ -global concavity, nonincreasing when  $v_i(c_{im}) < s_m$ , nondecreasing when  $v_i(c_{im}) > s_m$ , and 0 when  $v_i(c_{im}) = s_m$ -is  $[v_i(c_{im}) - s_m]^2$ .

Therefore, the action taken by the leadership is described by

$$a_{i(t+1)} = \sum_{m=1}^{M} \omega_{im(t)} [\nu_{i(t)}(c_{im(t)}) - s_{m(t)}]^2$$
(2.1)

To illustrate this process, imagine that state *i*'s constituency is focused on two dimensions of the international system, the military (or *realpolitik*) and the ideological spheres, and is considerably more interested in the latter than in the former ( $\omega_{ir} = 0.25$ ,  $\omega_{iy} = 0.75$ ). In the ideological sphere, where 1 represents the spread of the state's domestic political regime throughout the globe and 0 represents its com-

<sup>&</sup>lt;sup>58</sup>See Attfield, Demery, and Duck (1991) for an introduction to the rational expectations literature.

<sup>&</sup>lt;sup>59</sup>Implicit in this model is the assumption that states are rich enough to expend whatever their constituencies demand. Given that the states under study are exclusively Great Powers and they are not studied during wartime, it seems quite reasonable to assume that they are not exerting themselves to the absolute utmost.

plete disappearance outside of the borders of *i* itself, opinion in *i* is divided: a substantial group believes strongly that its own form of government is just and should be promoted, but a slightly larger group, while it has a mild preference for some governments of its own type, generally prefers to allow other peoples to choose their own path. In the *realpolitik* sphere, however, the majority believe that more power is unconditionally better and would therefore be happiest if *i* were to achieve hegemony. These constituency preferences could be represented by a bimodal  $c_{iy}$  distribution perhaps with modes at 0.3 and 1, and a mean at 0.6—and a  $c_{ir}$  distribution where the constituents are clustered at 1. At present, the structure of the system is not especially close to either of the state's ideal points: the state's political ideology has spread to about 20% of the globe, the state possesses 15% of the realized military capabilities in the system, and its allies possess a mere 5%. To determine the demand for activity on the part of the leadership we need only multiply weights by the distance between ideal points and the current status of the structure of the system and sum across dimensions, so:

$$a_{i(t+1)} = \sum_{m=1}^{M} \omega_{im(t)} [v_{i(t)}(c_{im(t)}) - s_{m(t)}]^{2}$$
  
=  $\omega_{iy(t)} [v_{i(t)}(c_{iy(t)}) - s_{y(t)}]^{2} + \omega_{ir(t)} [v_{i(t)}(c_{ir(t)}) - s_{r(t)}]^{2}$   
=  $(0.75 \times (0.60 - 0.20)^{2}) + (0.25 \times (1 - 0.20)^{2})$   
=  $(0.75 \times 0.16) + (0.25 \times 0.64)$   
=  $0.28$ 

Finally, we need to calculate the instantaneous rate of growth (or decrease) in the state's activity,  $\dot{a}_i$ , in order to characterize this as a dynamic system. This is done simply by subtracting the existing level of activity from the right-hand side of the equation:

$$\dot{a}_{i} = \sum_{m=1}^{M} \omega_{im} [\nu_{i}(c_{im}) - s_{m}]^{2} - a_{i}$$
(2.2)

(where  $\dot{a}_i \equiv \dot{a}_{i(t)} \equiv a_{i(t+1)} - a_{i(t)}$  and the time subscripts are dropped for notational convenience).

Next, how should we model the impact of the state's actions on the structure of the international system? Three points are paramount. First, the level of the state's activity must be weighted by its capacity to produce change, which is proportional to its latent capabilities,  $\pi_i$ .<sup>60</sup> In the case of a complete absence of capabilities, the state's actions should have virtually no impact on the structure of the system. As capabilities increase, the impact of the state's activities should increase proportionally.

Second, the state will only seek to alter the structure of the international system to the extent that that structure is inconsistent with its security needs—and success

<sup>&</sup>lt;sup>60</sup>Though see Footnote 57.

### THE MODEL

in transforming the system will produce less, not more, ambition to change it. For example, a state that seeks security through democracy would exert less and less effort as its efforts succeed the rest of the world approaches a fully democratic condition. This tendency—a simple logical necessity, really—could be captured in the term  $[v_i(c_{im}) - s_m]^2$ , above. Unfortunately, this quantity has an undesirable characteristic that is the mirror image of the one mentioned previously: in this case we *do* want to allow positive and negative changes to *s*, because states might act to move the status quo in either direction. The most straightforward quantity that retains this term's desirable qualities while allowing movements in both directions is  $[v_i(c_{im}) - s_m]$ .

It is worth noting a substantial difference between the assumptions of the nested politics model and those of Gilpin (1981, 18-23) regarding the relationship between power and preferences. Gilpin argues that the appetite grows with the eating: as the state becomes more powerful, it becomes more able, and therefore more willing, to expend resources in pursuit of security goals.<sup>61</sup> The argument of the nested politics model is a bit more complex. It argues that a different dynamic is implicated in the behavior of rising powers: as their latent capabilities ( $\pi$ ) increase, so does the impact that their activity has on the structure of the system. In that sense, the model agrees with Gilpin that security is "easier" for a more powerful state to purchase than it is for a weaker one.

However, the nested politics model also argues, in line with standard utilitymaximization models, that the closer the status quo gets to the state's ideal point (that is, as  $[v_i(c_{im}) - s_m]$  approaches zero), the more satisfied it will be, and the less it will exert itself in order to achieve its goals. This tendency mitigates *against* increases in levels of state activity, producing a built-in moderating effect: as the state becomes more powerful and gets more of what it wants, it scales back its effort. Gilpin's argument suggests that, as this occurs, the state's ideal point should shift as well, to such a degree that the state's level of dissatisfaction actually increases despite having received more of what it wants. It seems nearly impossible to evaluate this argument, given the many possible reasons for exogenous variation in state ideal points—but by permitting ideal points to be exogenous in the empirical section it is at least possible to allow for such variation to occur without constituting a threat to the model's conclusions.

Finally, only the amount of the state's activity that is devoted to producing changes in any given sphere should have an impact on that sphere: if 90% of a state's activity is prompted by its position in the *realpolitik* sphere and 10% is produced by its position in the economic sphere, its activities should mostly produce results in the military sphere, all else equal. The proportion of activity that state *i* will devote to changing the structure of the system in sphere *m* is given by  $\frac{\omega_{im}[v_i(c_{im})-s_m]^2}{\sum_{i=1}^N \omega_{im}[v_i(c_{im})-s_m]^2}$ . Since all of these values will have the same denominator, we can eliminate it and simply work with the proportional quantity  $\omega_{im}[v_i(c_{im})-s_m]^2$ .

Those three principles lead to a straightforward set of equations. For a single state n and a single systemic dimension m,

<sup>&</sup>lt;sup>61</sup>I am grateful to Randall Schweller for bringing this point to my attention.

$$\dot{s}_m = a_i \pi_i \omega_{im} [v_i(c_{im}) - s_m]$$

Expanding to two states, i and j, can be done by simply summing their impact on the state variable  $s_m$ , so:

$$\dot{s}_m = a_i \pi_i \omega_{im} [v_i(c_{im}) - s_m] + a_j \pi_j \omega_{jm} [v_i(c_{jm}) - s_m]$$

-or, in general,

$$\dot{s}_m = \sum_{i=1}^N a_i \pi_i \omega_{im} [v_i(c_{im}) - s_m]$$
 (2.3)

Modeling multiple systemic dimensions follows in a straightforward way. For two dimensions, say, the ideological and *realpolitik* spheres, the equations would be

$$\dot{s}_{y} = \sum_{i=1}^{N} a_{i} \pi_{i} \omega_{iy} [v_{i}(c_{iy}) - s_{y}]$$
$$\dot{s}_{r} = \sum_{i=1}^{N} a_{i} \pi_{i} \omega_{ir} [v_{i}(c_{ir}) - s_{r}]$$

In this way, the impact of the actions of all of the states in the system on all of the dimensions deemed relevant by each can be modeled.<sup>62</sup>

$$\dot{s}_{ir} = a_i \pi_i \omega_{ir} (1 - s_{ir}) - a_j \frac{\pi_j}{N - 1} \omega_{jr} (1 - s_{jr}) - a_k \frac{\pi_k}{N - 1} \omega_{kr} (1 - s_{kr})$$

$$\dot{s}_{jr} = a_j \pi_j \omega_{jr} (1 - s_{jr}) - a_i \frac{\pi_i}{N - 1} \omega_{ir} (1 - s_{ir}) - a_k \frac{\pi_k}{N - 1} \omega_{kr} (1 - s_{kr})$$

$$\dot{s}_{kr} = a_k \pi_k \omega_{kr} (1 - s_{kr}) - a_i \frac{\pi_i}{N - 1} \omega_{ir} (1 - s_{ir}) - a_j \frac{\pi_j}{N - 1} \omega_{jr} (1 - s_{jr})$$

Note the subtraction of the effects of *j*'s and *k*'s activity from *i*'s portion of the *realpolitik* sphere, and of its

<sup>&</sup>lt;sup>62</sup>This characterization of the international system is based on the assumption that each *systemic* dimension is *conceptually* unidimensional—that the state of the system and the states' ideal points can be characterized as points along a single continuum. In the above examples this characterization may be a plausible one: the ideological sphere can be characterized by a continuum with systemic democracy at one end and systemic autocracy at the other, and the *realpolitik* sphere can be characterized by a continuum with *systemic* democracy at one end and *systemic* autocracy at the other, and the *realpolitik* sphere can be characterized by a continuum with *sistemic* democracy at one end and *systemic* autocracy at the other, and the *realpolitik* sphere can be characterized by a continuum with *sistemic* democracy at one end and *systemic* autocracy at the other, *sistemic* autocracy at the other ( $c_{ir} = 1, c_{jr} = 0$ ). A potential problem arises, however, when an additional state, *k*, is added to the mix. *k*'s *realpolitik* ideal point is not on the continuum just described; it might be happiest if *i* and *j* were rendered completely powerless, but such an outcome cannot be characterized by a point on the continuum just described. One way to deal with the problem of multidimensional ideal points within a single systemic dimension is to break the state of the system down into multiple equations, one for each state:

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If it is possible to envision a change of the status quo point from s to s' such that  $[v_i(c_{im})-s'_m] < [v_i(c_{im})-s_m]$  and  $[v_j(c_{jm})-s'_m] < [v_j(c_{jm})-s_m]$ , then joint gains for i and j are possible in s.<sup>63</sup> In a sphere in which joint gains are possible, a sympathetic state is a state whose ideal point lies on the same side of the status quo as one's own; therefore, in the area bounded by the sympathetic state's ideal point and the status quo point, joint gains are possible. An antagonistic state is a state whose ideal point lies on the other side of the status quo from one's own. In a sphere in which joint gains are not possible, all states are antagonistic states. It should be emphasized that these terms have nothing to do with the level of amity or hostility that characterizes the relationship between the states.

Finally, as the above equations make clear, states are assumed to react entirely to the changes that other states produce in the structure of the system rather than anticipating those changes and counteracting them ahead of time. Clearly, in reality states do both to some degree, but what explicitly justifies the assumption in this model? The partial-adjustment framework elaborated above provides an answer: While states possess accurate information about their own ideal points and capabilities and the extent to which different dimensions of the system matter to them, they are highly uncertain about these quantities in other states. The compounded uncertainty across all of these quantities means that the extent to which states will be proactive rather than reactive is exceedingly small. Because observation of the impact of states' actions is often difficult even years after the fact, moreover, contemporaneous learning is virtually impossible.

To illustrate this argument formally: Brainard (1967) has shown that uncertainty about the parameters of a model lead to partial adjustment, with the degree of "partialness" increasing with uncertainty, and Startz (2003) has applied this intuition to a dynamic setting. One finding is that even a modest amount of uncertainty can produce extremely minimal adjustment to the anticipated behavior of other states as an optimum. If adjustment of *a* were to produce results in *s* in a purely deterministic way, say,  $s = \xi a$ , but we are uncertain about the value of  $\xi$ , it is rational to adjust by a fraction  $\lambda_{\xi}$  of the optimal adjustment, where

$$\lambda_{\xi} = \frac{\bar{\xi}^2}{\bar{\xi}^2 + \sigma_{\xi}^2}$$

Imagine that *i* wishes to counteract some fraction x of *j*'s activity (which, remember, will also be a partial adjustment because action is costly for *j* as well). Imagine

from theirs. This device ensures, assuming that the various  $s_{ir}$  sum to unity when the simulation begins, that they will continue to do so. The division of each player's capabilities by one less than the total number of players N indicates that each state's attention is divided equally among its potential foes—a reflection of the realist maxim that no one can be trusted in an anarchic world. Modifications of this assumption are, of course, possible. For example, a more sophisticated assumption, easily modeled, might be that states focus their energies against other states in direct proportion to their relative (realized) capabilities.

<sup>&</sup>lt;sup>63</sup>Examples include ideological or religious spheres, in which two or more states with the same preferences over outcomes would both benefit more if a greater share of the system were organized according to their preferred belief system.

also that *i* has a fairly good knowledge of the state of *j*, which for the sake of illustration we take to mean  $\bar{\xi}^2 = \sigma_{\xi}^2$ . Given uncertainty about  $\pi_j$ ,  $\omega_{jm}$ , and  $v_j(c_{jm})$ , the latter two of which influence  $\dot{s}_m$  twice (once immediately and a second time indirectly, via *a*), the fraction of *j*'s activity that *i* would end up countering would be  $\varkappa \lambda_{\pi} \lambda_{\nu(c)}^2 \lambda_{\omega}^2$ , or  $\frac{1}{32} \varkappa$ —a very small fraction indeed.

# **General Hypotheses**

The model just described suggests some general statements about the working of the system. Individually, the actor-level and structural-level equations offer insights into the short-term effects of changes in the model parameters which, when combined, provide a comprehensive understanding of the workings of the system. In addition, although the model is agnostic regarding which dimensions of the structure of the international system will be deemed relevant by the actors, a review of the historical literature in the next chapter supports the argument that the balance of power is a consistent focus of states' attention, though the exact form that the balance takes varies somewhat from one period to the next. Given the persistence of power and its inclusion with other independent variables, the literature on political realism offers a third hypothesis worth testing, one that suggests that power, exclusively, should be capable of explaining outcomes.

### Actor-Level Hypothesis

H<sub>A1</sub>: International structure prompts state security activity in proportion to the product of salience and dissatisfaction with the status quo.

If, for example, the state is completely disinterested in the balance of power, the salience of the balance of power will be zero, and no balance or imbalance of power could possibly prompt state action. On the other hand, if the state is perfectly satisfied with the status quo, no action is necessary. If neither of those conditions holds, the hypothesis argues that the level of state activity prompted by the balance of power will be proportional to the product of the salience of the balance of power and the state's dissatisfaction with the balance of power—and that the same holds true for all other structural dimensions of the international system. Because level of satisfaction can only be gauged relative to the condition of the structure of the system, structure plays the role of an independent variable in this part of the theory.

In terms of comparative statics, this hypothesis implies that if a state's ideal point shifts away from (toward) the systemic status quo along any dimension, its level of activity will increase (decrease). Conversely, if the status quo of a given systemic distribution shifts away from (toward) a state's ideal point, the state's level of activity will increase (decrease). Finally, if a state's worldview changes to increase (decrease) its emphasis on a given dimension of the system, all else being equal, the state's level of activity will increase (decrease).

Intuitively, as the extent to which a state cares about the distribution of some good in the international system increases, discrepancies between the status quo point and the state's ideal point will prompt increasingly strong demands for action, and the converse is true.<sup>64</sup>

### Structural Hypothesis

H<sub>St1</sub>: State security activity alters international structure in proportion to the product of state security activity, state latent capabilities, salience, and dissatisfaction with the status quo.

Here, the question is, with many Great Powers pushing and pulling at (for example) the balance of power, how much of an impact will each one have? The answer is proportional to activity, salience, power, and dissatisfaction. Inactive states, obviously, will change nothing. Powerless states will have no impact on outcomes; as their power grows, so too will their influence—a result in line with asymmetric Nash bargaining models.<sup>65</sup> States that see no need to alter the balance, either because it is not salient to them or they are completely satisfied, will not do so. If none of these conditions holds, the state's influence in shaping the balance—and in shaping other structural dimensions—will be proportional to the product of its capabilities, its dissatisfaction, and the salience of that sphere. Note that, in this part of the theory, state activity is an independent variable and structure is the dependent variable.

Some comparative statics results follow from this statement as well. An increase (decrease) in a state's level of activity will improve (worsen) its positions<sup>66</sup> along whatever dimensions interest it, *ceteris paribus*. A change in a state's worldview to increase (decrease) its emphasis on a given dimension of the system will improve (worsen) its position in that sphere. A change in a state's ideal point away from (toward) the status quo point along a given dimension will result in a shift in the status quo in the same direction. An increase (decrease) in a state's latent capabilities will improve (worsen) its position in any sphere in which another state is even minimally interested. A change in a state's worldview to increase its emphasis on and decrease its emphasis on another will improve its position in newly-emphasized dimensions and worsen its position in newly-deemphasized ones, as long as other states are even minimally interested in the latter.

### **Realist Hypothesis**

Although the logic of the model itself does not imply it, the history of the three periods under study suggests an additional hypothesis that merits exploration. The model is agnostic regarding which dimensions of the structure of the system will be emphasized by the states, but in each period, both balances of power and balances of ideology are said to figure prominently in systemic politics (see Chapter 3 for details). A fairly well-rehearsed argument in the realist literature is that, although states may appear from time to time to pursue ideological goals, the appearance is more illusion

 $<sup>^{64}</sup>$  Most simply, this follows from (2.1):  $\alpha$  is strictly increasing in  $\omega.$ 

<sup>&</sup>lt;sup>65</sup>Binmore (1998, 126-128).

<sup>&</sup>lt;sup>66</sup>By "improving the state's position" I mean moving the status quo toward its ideal point, when joint gains can be realized, or increasing its share of the systemic distribution of goods, when they cannot.

than reality: they only do so when the pressures of the ideological sphere and the pressures of the *realpolitik* sphere are aligned (as, for instance, when regime change will produce a valuable ally). As Morgenthau (1948, 86) wrote,

It is a characteristic aspect of all politics, domestic as well as international, that frequently its basic manifestations do not appear as what they actually are—manifestations of a struggle for power. Rather, the element of power as the immediate goal of the policy pursued is explained and justified in ethical, legal, or biological terms. That is to say: the true nature of the policy is concealed by ideological justifications and rationalizations.

Similarly, Nicholas Spykman (1942, 18) writes that

[t]he statesman who conducts foreign policy can concern himself with values of justice, fairness, and tolerance only to the extent that they contribute to or do not interfere with the power objective. They can be used instrumentally as moral justification for the power quest, but they must be discarded the moment their application brings weakness.

These and similar quotes, which could fill a substantial appendix on their own, suggest, not that ideological or moral motivations for policies are nonexistent, but rather that, when they do exist, they will invariably align well with the power-politics motives of the state. Either the two do not diverge or, when they do, ideology will not drive policy because the resulting policy would not be in the interest of the state. This logic suggests

 $H_{R1}$ : The balance of ideology will have no impact on state behavior, independent of the impact that it has when its prescriptions correlate with those of the balance of power.

# **Implications for Other Theories**

The model has a variety of additional implications as well. Although testing all of them directly is beyond the scope of the present study, and some describe scenarios that are either entirely hypothetical or quite rare, they are nevertheless of interest because they speak to existing conclusions from established international relations theory. In order to illuminate them I will explore the manner in which different assumptions about the values of the inputs to that model produce different behaviors and systemic outcomes. Some of these predictions accord with the claims of existing theories of state or systemic behavior; many do not. To the extent that the hypotheses above receive empirical support in subsequent chapters, the following implications should be considered relevant to the literatures that they address.

### Offensive and Defensive Realism

The first, and most obvious, point of contact with the existing literature on systemic theory is the relationship between the nested politics model and realism—either in

# Chapter 3

# Large-N Evidence

In this chapter I describe the procedures by which I have attempted to evaluate the theory's predictions. I set out to evaluate the theory in the context of the three European systems that existed between 1815 and 1991, which I call the Vienna system, the interwar system, and the Cold War system, respectively. In each case, the geographic scope of the system is confined to the European continent,<sup>1</sup> and the actors are understood to be those Great Powers or superpowers whose involvement in the affairs of the continent is a necessary factor in the calculations of the others. I will describe the decisions regarding which states constitute the actors in more detail below.

Before turning to the data and analyses, however, it is necessary to discuss the historical context that informed the analysis of each period. This discussion will inform the subsequent section, which describes the data that were gathered and utilized to test the model, and the discussion of the data, along with the theoretical material from Chapter 2, will inform the statistical modeling that follows.

## The European System

### 1815-1914

The distinction between day-to-day interactive politics, on the one hand, and the sort of regulatory politics that are the focus of the nested politics on the other, comes into sharp focus when we examine European international relations in the period between the Napoleonic Wars and World War I. Indeed, historians have argued that 1815 was a watershed year for regulatory politics in Europe:

The impressive thing about the behaviour of the Powers in 1815 is that they were prepared, as they had never previously been prepared, to waive

<sup>&</sup>lt;sup>1</sup>This decision is necessarily an arbitrary one, and it would be possible, especially in the Cold War years, to argue for the inclusion of the entire world in the system. The drawback to doing so, I think, is coherence: Europe was the source of each of the three huge wars that initiated each period, and within each period the actors were cognizant of the fact that Europe remained the region of primary importance as far as regional, and later global, security was concerned.

their individual interests in the pursuit of an international system. This fact is not rendered any less impressive by the recognition that they were prepared to waive their individual interests because it was in their individual interests to do so.<sup>2</sup>

Schroeder (1994b) also argues that this change constituted a fundamental "transformation" in European politics. The European regulatory mechanism was crude when compared to, say, domestic political institutions, but it nevertheless performed some of the same functions.

One form of regulatory politics was based on the notion that war could be prevented if countries could be rendered unable to profit from it. Accordingly, regulation was to be accomplished by maintaining the balance of power. It must be emphasized that the distinction between the dog-eat-dog balance of power *politics* of the 18th century and the mutually reinforcing territorial settlement and legal superstructure that came to be called, perhaps misleadingly, the balance of power *system* in the 19<sup>th</sup> century is a critical one. Making this point most eloquently, and convincingly, is Schroeder (1994b); though he eschews the use of the phrase "balance of power" at all, the international regime that he describes, in which states forego short-term gains in order to foster cooperation and peace, reasonably approximates a balance-of-power system in this sense.

The balance of power system had two main incarnations: the *static* version of balance-of-power theory emphasized equality of capabilities among units, whereas the *dynamic* version of balance-of-power theory emphasized equality of capabilities among coalitions.<sup>3</sup> To the believers in the static version, "balance of power" was a noun: if the capabilities of states could be made equal, the balance would deter aggression. To those desiring a dynamic balance, "balance of power" was a verb: the proper way of dealing with a threat was to balance against it.

Regardless of the form of balance sought, the emphasis was on the distribution of long-term, or latent, material capabilities and strategic assets of the Great Powers those that could be brought to bear in an extended conflict such as the one just fought. Nevertheless, the ideal distribution of capabilities depended on whether one was a believer in the static or the dynamic version of the balance of power: a static balance required a relatively equal distribution, whereas a dynamic version permitted an unequal one (and even encouraged it, as the state taking the "balancer" role should ideally be considerably more powerful than the rest in order to perform its function).

A second regulatory mechanism revolved around the balance of political ideology rather than the balance of power as a guarantor of peace. Here, a political ideology is intended, not in a critical or partisan sense, but in a neutral, positivist vein: political ideologies are sets of related ideas that drive constituents' evaluations of right and wrong and their perceptions of the social status quo and prescribe (and proscribe)

<sup>&</sup>lt;sup>2</sup>Hinsley (1963, 197).

<sup>&</sup>lt;sup>3</sup>The labels are my own. For a lucid dissemination on the general subject of the meaning of the balance of power see Haas (1953). I have no intention of delving further into definitional intricacies, but the interested reader will find food for thought in Morgenthau (1948, 132-133), Rosecrance (1963, ch. 11), Kissinger (1957, 146-147), Waltz (1979, 117-123, 163-170), and Craig and George (1983, ch. 3).

action.<sup>4</sup> As a result, governments that claim legitimacy based on a given ideology and act in a manner consistent with its prescriptions can sustain their legitimacy: as Finer (1997, 29) notes in the introduction to his monumental historical study of governance, "[w]here the claim of the ruler to authority is out of kilter with the prevalent belief-systems of the society, he must either 'change his plea,' that is, make himself acceptable in terms of that belief system, or else de-legitimize himself and fall." The sustenance of domestic legitimacy, in turn, reinforces a belief in the universality of the norms and beliefs that underpin it, which, under the right external circumstances, can produce a foreign policy that reflects, to some degree, the values that support the regime.

In the case of Vienna, those who sought a balance of ideology<sup>5</sup> generally saw an overwhelming preponderance of shared conservative (or "legitimist") governments as conducive to peace. The principle of legitimacy encompassed both the restoration of monarchs to their thrones and, by some accounts, the recreation of the *status quo ante bellum* in regard to the territorial distribution of states.<sup>6</sup> The logic linking legitimacy to peace was fairly straightforward: the French revolution, based on liberty and constitutionalism, had snowballed into a general war of immense proportions. Future revolutions of the same sort could therefore not be trusted, so the best guarantor of peace was continued conservative rule.

It is worth noting that, whereas the balance of power focused mainly on opportunity, this mechanism focused primarily on willingness.<sup>7</sup> Kissinger (1994, 77) neatly captures the essence of the distinction when he writes that "[t]he balance of power inhibits the *capacity* to overthrow the international order; agreement on shared values inhibits the *desire* to overthrow the international order." Here, the emphasis was not on capabilities but rather form of government: liberalism and liberalization were seen as the most serious threats to the peace.

The structure of the international system throughout this period, therefore, consists primarily of two dimensions: the balance of power and the balance of ideology, or the extent to which liberal government had spread throughout the continent.

<sup>&</sup>lt;sup>4</sup>This aggregated definition relies most heavily on those of Seliger (1976, 11), McClosky (1964, 362), and Mullins (1972).

<sup>&</sup>lt;sup>5</sup>In this instance, paradoxically, "balance" refers specifically to a preponderance rather than a roughly equal distribution or to any distribution at all.

<sup>&</sup>lt;sup>6</sup>See Holmes (1982, 165), for example, for the more restricted version—"the right or title to rule ascribed to hereditary kings"—and Rich (1992) for the more expansive. The latter goal was considerably more difficult to accomplish in 1815 as, e.g., the Holy Roman Empire was clearly beyond salvation, and if it is included in the definition the myriad conflicts with the requirements of an equitable distribution of capabilities become obvious. It is also worth noting that Schroeder (1994b, 530) argues that legitimacy referred to nothing more nor less than the rule of law. While I am loathe to attempt to adjudicate, it does seem that historical consensus favors the more restricted version of the first definition, as do certain historical details—Metternich's reactions to the entirely legal grant of a Portugese constitution by Dom Pedro, for example, or the plot to overthrow Murat prior to Napoleon's return. On a somewhat more speculative note, it seems to me that Schroeder's understanding of legitimizery and the more orthodox version can be reconciled if we add the caveat that, according to the legitimist powers, only hereditary monarchs are capable of exercising legitimate legal control over the state. Indeed, were it not so, Frederick William's unwillingness to accept the crown of Germany from the Frankfurt Parliament in 1849—the infamous "crown from the gutter"—would be difficult to explain.

<sup>&</sup>lt;sup>7</sup>See Starr (1978) for a discussion of the breadth of the applicability of these two concepts.

### 1919-1939

Regulatory politics were evident in the interwar period as well. Indeed, the institutional infrastructure established in the wake of the war—most notably, the Treaty of Versailles and the League of Nations, but also the disarmament conferences of Washington, London, and Geneva—were explicit attempts to create an international environment in which disagreements among nations would be less likely both to occur and to escalate to war. As might be anticipated, the main dimensions of regulatory politics in this period were an extension of the trends evident in the latter part of the 19<sup>th</sup> century as well as a reaction to the carnage of the First World War.

The ideological conflict between legitimist and liberal had been decided rather concretely in favor of the latter: in the immediate post-World War I period, Europe as a whole reached a level of democracy that it would not re-attain until 1989.<sup>8</sup> Nevertheless, despite this apparent unity there were large and growing cracks in the foundations of liberalism in Europe: its shortcomings had manifested themselves in the economic conditions of the last quarter of the 19<sup>th</sup> century, and many citizens and politicians had begun to yearn for alternative social orders.<sup>9</sup> As a result, the period was characterized by a greater range of rival ideologies than either the post-Napoleonic era or the Cold War. Advocates of these ideologies agreed that this diversity of philosophies posed a danger to the peace, though they differed, predictably, in just how it did so.

Liberals, like Woodrow Wilson, typically saw the existence of autocracy as a threat to the peace. Wilson's view of history involved a steady progression toward a more democratic world, and he believed firmly that the spread of democracy would be beneficial both because of its potential to defuse revolution<sup>10</sup> and because of its damping effects on external aggression. Wilson's vision for a peaceful postwar world, moreover, was centered on an association among free and democratic states which would, when the occasion arose, come together to preserve peace. Democracy was crucial to the plan: "A steadfast concert for peace can never be maintained except by a partnership of nations" because "[n]o autocratic government could be trusted to keep the peace."<sup>11</sup> In a very real sense, Wilson's plan for a system of collective security to replace the old balance-of-power system was not to be an alien system imposed upon the states of the world in direct contradiction to the dictates of their nature, as critics have since argued,<sup>12</sup> but rather the natural international expression of a democratic domestic order.

The liberal vision for postwar peace was far from universal, of course: in Soviet Russia, V. I. Lenin's victorious Bolsheviks had an entirely different view of the march of history. Blinded by theory, the Bolsheviks expected that, in the context of the momentous internal contradictions of capitalist imperialism, the Soviet example would prompt spontaneous and successful communist uprisings throughout Europe.

<sup>&</sup>lt;sup>8</sup>The simple mean of European states' Polity scores, discounting states undergoing transitions, interruptions, and interregna, reached 6.5 in 1918, a score almost exactly equivalent to its score in 1989.

<sup>&</sup>lt;sup>9</sup>On this period see Dangerfield (1997) for England in particular; Stone (1984) expands Dangerfield's thesis and demonstrates its applicability to the Continent.

<sup>&</sup>lt;sup>10</sup>On the relationship between revolution and war see Walt (1992).

<sup>&</sup>lt;sup>11</sup>Ambrosius (1987, chs. 1-2, p. 31); see also Knock (1992, 112-113 and *passim*).

<sup>&</sup>lt;sup>12</sup>For an eloquent example see Carr (1939, 27-31).

When that hope met with only very limited and transitory success in such places as Hungary and Bavaria, the Bolsheviks proved willing to advance the cause of world revolution by force if necessary, diverting Red Army troops from their struggles in the Russian Civil War to drive Polish troops back to Warsaw. When their military effort stalled and it became clear that neither example nor brute force would succeed, they fell back on promoting Communist revolution abroad, but the failure of an attempted uprising by German communists in March, 1921, and rising opposition to the Bolshevik regime at home, prompted a period of internal consolidation. Nevertheless, when the Union of Soviet Socialist Republics was formed, it was the embodiment of an ideology that was, by its nature, devoted to the overthrow of the existing order throughout Europe.<sup>13</sup>

Communism was explicitly a response to the shortcomings of capitalism; fascism, by contrast, was much more a response to the shortcomings of parliamentary democracy. Liberal distrust of executive authority had led the newly democratic states of Europe to rely heavily on political instruments that were subject to popular control-parliaments elected via proportional representation systems-and to vest substantial power in the legislative branch. The results, while democratic, were far from orderly, and for a time politicians sought a more authoritarian solution to the problem of national governance, especially but not exclusively during the period of the Depression. Right-wing governments arose in Italy, Austria, Portugal, Spain, and Romania. At first, authoritarian rule was seen as no threat; indeed, George Kennan proposed "benevolent despotism" for the United States, and Walter Lippmann urged President-elect Roosevelt to assume dictatorial powers.<sup>14</sup> It was not until the rise to power of the Nazi party in Germany that the dangers of malevolent despotism were made clear. In contrast to Soviet leaders, Hitler did not seek to overthrow existing states by promoting like parties within their borders; it soon became clear, however, that Nazism, if left unchecked, posed a much more direct military threat to their very existence.15

In many ways, these developments represented the progression of trends already present in the 19<sup>th</sup> century—Wilson's desire to forestall revolution with representation, for example, echoes that of Palmerston, and Mussolini's desire to quash republican governments in favor of order bears at least a family resemblance to that of Nicholas I. The ideological breadth of European politics might be reaching an apogee, but in many ways the logic of the conflict that resulted was similar.

Most of the major changes in regulatory politics had to do with the perceived relationship between power and security. The most subtle, yet perhaps most important, of these changes was a reversal of the roles of latent and realized power. When the Vienna statesmen sought to achieve a balance of power, they did so by adjusting the latent power of the major states in a manner designed to discourage aggression

<sup>&</sup>lt;sup>13</sup>Sontag (1971, ch. 3).

<sup>&</sup>lt;sup>14</sup>Mazower (1998, ch. 1); Steel (1980, 300).

<sup>&</sup>lt;sup>15</sup>Lukacs (1998, 162). Lukacs uses the lack of ideological support by Hitler for Nazi parties abroad to demonstrate that Hitler pursued a policy of *realpolitik*, a conclusion that would most likely horrify Bismarck; it seems more accurate to argue that Hitler pursued very ideological ends via traditional powerpolitics means. Works on Hitler's personal ideology are legion; a well-respected and persuasive example is Jäckel (1972).

by depriving each of the ability to prevail in a large-scale, prolonged, bloody conflict with the others. Two developments in the intervening years changed the way that statesmen though about the problem of preventing war. First, the spread of the liberal, democratic ideal made the option of bartering and absorbing small nations in order to balance latent power resources much less appealing: equality of power would have to be obtained, more or less, within parameters that were established by movements for national independence. Second, World War I demonstrated that massive bloodshed need not require decades to accomplish: while the Napoleonic Wars took somewhere between 2.5 and 3.5 million military lives over the course of sixteen years, the First World War managed to deprive 9 million soldiers of their lives in roughly a quarter of the time. Under the circumstances, adjusting latent power was neither a desirable nor a feasible method of preventing war.

Realized power, however, could be manipulated, and it could be used to compensate for imbalances in latent power. It was precisely this goal that the French in particular pursued, proposing limitations on German military power in the hopes of keeping Germany in what Wolfers calls a state of "artificial inferiority"—artificial in the sense that its realized power was not to be permitted to correspond to its latent power.<sup>16</sup> Toward this end, Articles 159-210 of the Treaty of Versailles dealt exhaustively with military affairs: the victorious Allies unambiguously pursued a policy of promoting peace by establishing and maintaining a favorable distribution of existing military forces-in-being. In determining how to order the relationship between latent and realized power, in short, the question that should be asked is "What did states pursue with what?"—and in the interwar period, states pursued a certain balance of realized power, redressing imbalances when necessary by bringing to bear their industrial and financial resources.<sup>17</sup>

Another major change in the relationship between security and power had to do with the distribution of interest. Following Vienna, France, devoid for the moment of Bonapartes, had been quickly reintegrated into the European system; Germany, whose aggression was thought to be less a result of form of government than of national character or national interests, was not—at least, not nearly to the same degree. From the onset, the balance of, say, French vs. British capabilities was a matter of little concern. Rather, the focus was overwhelmingly on relative German capabilities. The term "balance" came to connote preponderance rather than equality, and in particular, a preponderance that would keep Germany in check.<sup>18</sup>

<sup>&</sup>lt;sup>16</sup>Wolfers (1966, 13).

<sup>&</sup>lt;sup>17</sup>See e.g. Schweller (1998, 26), Bell (1997, ch. 11). Because it is difficult to argue for the absence of *some* feedback between latent and realized power, I forward this argument with some caution; nevertheless, it seems to me to be the most reasonable one under the circumstances. The structural dimension of interest should be the one upon which decision makers and constituents focus, and it is clear that during this period realized rather than latent military capabilities fit that description (though see Bariéty's (1977) massive work, the relevant section of which is summarized in English in Jacobson (1983, 627-28), for a plausible counterargument). One could, of course, endogenize both, but given the extreme rarity of the use of force in the interwar period it seems implausible to argue that military power was used regularly to redress the balance of latent capabilities, as it clearly was following Vienna (the exception, of course, being the French occupation of the Ruhr).

<sup>&</sup>lt;sup>18</sup>See, for example, Wolfers (1966, 126), who argues that the French strove to maintain the *équilibre continental*, and that, in his words, "*'Equilibre*' in the French sense of the term called for the unquestioned preponderance of one group of powers, namely, the one which was backing the established order." In

Finally, citizens and statesmen began to pay serious attention not just to the distribution of power but to *absolute* levels of power as well. The widespread perception that the prewar arms race had played a role in sparking the conflict spurred the belief that the outbreak of another war could be averted if arms levels were kept low. Public sentiment in democratic states ran strongly in favor of disarmament, and statesmen strove to achieve it in the Treaty of Versailles, the League of Nations, and sundry conferences devoted specifically to the subject.

In addition to these fairly subtle but nevertheless very important changes in the structure of the international system, there were changes in the actors as well. An independent Italy became a marginal, but increasingly prominent, member of the Great Power club, just as Austria, shorn of its multiethnic empire, dropped out. At the same time, the proven military reach and overwhelming postwar financial dominance of the United States made it unambiguously a state that had to be taken into account in the calculations of the Continental powers—a fact that would be obscured, rather than altered, by its (mostly illusory) withdrawals from European politics in the immediate postwar period and the mid-1930s.

### 1945-1993

The second World War and its aftermath produced a system that was in many ways transformed. First, technology dramatically altered the meaning and the importance of the balance of power. As Schelling (1966, ch. 1) points out, the combination of aerial transportation, in the form of airplanes and missiles, and staggering firepower, in the form of ever-larger conventional and nuclear explosives, meant that it was no longer necessary to defeat the enemy in order to threaten the civilian population. Second, the further reduction of the western European powers by depression and war and the rise of the United States meant that the system was transformed from a multipolar to a bipolar one: only two states, the United States and the Soviet Union, possessed the means to have decisive influence over the shape of the postwar security structure.<sup>19</sup>

The nature of the two states in question also contributed substantially to the structure of the system. The right-authoritarian governments of the interwar years had been swept away, and the main left-authoritarian government, despite staggering human losses in the war, had been dramatically strengthened in the three decades since its birth. In this context, Soviet leaders no longer felt the need to fall back on building communism in one country. As a result, the two states that fell to the task of building a postwar order soon found that their domestic political ideologies played a powerful role in defining the context of their interaction. As Morgenthau (1948, 147) put it, the United States and the Soviet Union "compete with each other not only as

practice, although the new Soviet state might not have been counted among the latter, in practice the Germans were a far more pressing concern from a military point of view.

<sup>&</sup>lt;sup>19</sup>To argue that the superpowers did not take material capabilities into account in their policies is, for these reasons, patently folly. Nevertheless, realists of various stripes have disagreed over the question of whether or not they do so exclusively (see Rose 1998 for a review) and have often highlighted the extent to which American foreign policy in particular deviates from the requirements of power politics (Morgenthau 1952, though cf. Mearsheimer 2001, who argues that American national leaders speak the language of liberalism to mollify the masses while acting largely in accordance with *realpolitik* logic).

the two political and military superpowers but also as the foremost representatives of two different political philosophies, systems of government, and ways of life."

The Americans of the postwar years were the heirs to the Wilsonian ideal, a form of classical liberalism (that is, liberalism in the European rather than American sense) which emphasizes individual freedom as the ultimate good. The tradition, of course, has its roots in the formation of the American state and its independence from the tyranny of European monarchy.<sup>20</sup> Two elements of liberalism are generally emphasized in discussions of the American foreign policy tradition. The first is political: individual liberties are the highest values to be upheld; free political institutions are the best way to ensure individual liberties; therefore, free institutions are seen as the *sine qua non* of the just state. The second is economic: free trade is the engine of growth and collective prosperity and should therefore be implemented wherever and whenever possible.<sup>21</sup>

The main disagreement among Cold War historians arises from the question of which of these facets was the more important wellspring of American policy. Socalled orthodox historians, represented by the work of Arthur Schlesinger, Jr. (see e.g. Schlesinger Jr. (1967)) and Herbert Feis (1970), emphasize the first facet and argue that Soviet ideological messianism posed a grave danger to the interests of the United States; adherents to the revisionist school, represented by the work of William Appleman Williams (1972), D. F. Fleming (1961), Gar Alperovitz (1994), and Walter LaFeber (1985), emphasize the second facet and argue that the free-market compulsion to expand trade ties and secure access to primary goods at the lowest possible cost drove the United States to pursue an "Open Door" policy which could not tolerate a separate communist sphere. A third school, labeled "post-revisionism" (Gaddis 1982; Gaddis 1983), deemphasized the ideology of both states, rejecting in large part the image of American economic-imperial ambitions while incorporating insights regarding the use of America's economic and military strength to achieve its goals.

Since the end of the Cold War historians have struggled to achieve a larger, more synthetic understanding of the conflict, one that emphasizes not the importance of any one factor as much as the complex interconnections among many of them; Westad (2000) is an excellent exploration of these issues and Suri (2002) and Leffler (2008) are solid early examples. The main point of contention across the various schools relates to the relative weighting of power and ideology in each state's worldview, with the post-Cold War perspective attempting the most evenhanded combination of the two: while concerns about power pervaded the Cold War, Leffler writes, "[t]he meanings attributed to developments in the international arena were influenced by ideological axioms and historical experience. ... The Cold War lasted as long as it did because of the ways in which American and Soviet ideas intersected with evolving conditions of the international system" (Leffler 2008, 8, 452).

The Soviet worldview at the end of the war was, to say the least, radically different. One of the most consistent themes in Marxist analyses of inter-class relations is

<sup>&</sup>lt;sup>20</sup>On this point see Perkins (1993).

<sup>&</sup>lt;sup>21</sup>Some scholars emphasize the point that the effects of American liberalism on foreign policy are magnified by its absolutism; hence Hartz's (1955, 286) remark about the American oscillation "between fleeing from the rest of the world and embracing it with too ardent a passion."

that of the "main contradiction"<sup>22</sup> which drives political evolution. To Lenin (1939), the main contradiction could be found within capitalism. Capitalism's excess production leads to a constant search for new markets (in the form of colonies), which eventually brings conflict. Meanwhile, capital accumulation leads to a falling rate of profit, economic crises, and a general worsening of the living conditions for the working class; as a result of the latter, revolution soon occurs. The main contradiction, here, was between socialism and capitalism, though the contradiction within capitalism could still be counted on to hasten its demise. Over time, many Soviet scholars have argued, the role of ideology has gradually changed, becoming less of a guide to behavior over time and more of a means of legitimating policy—in other words, becoming one determinant of policy rather than the overriding priority.<sup>23</sup>

The structure of the system reflected these realities. To the extent that Soviet and American political legitimacy depended on the perpetuation of ideologies that were by their nature antithetical to one another, the balance between democratic and communist states remained a matter of utmost importance. Largely due to its role in perpetuating or possibly altering that distribution, the military balance between East and West constituted a security matter of the utmost importance. Finally, because of their ever-increasing lethality and the looming prospect that another World War could exterminate the species, controlling absolute levels of nuclear armaments, like conventional arms control in the previous period, became a key component of maintaining the stability of the system.

### Who Are the Actors?

One could argue that an ideal systemic theory of politics would take into account the worldviews, capabilities, and activities of all of the actors in the system, just as a theory of planetary motion takes into account the sun, the major and minor planets, and their moons. Unfortunately, the requirements of gathering the requisite data on the smaller countries in the European system make such a task guite impossible, and actually modeling the impact of the behavior of every state in the system itself on the structure of the system, and vice-versa, would be technically impossible (given the degrees-of-freedom issues involved). Moreover, from the point of view of theoretical parsimony, modeling the interactions of all of the actors in the system would be entirely undesirable even if it were possible: just as the geographers in Borges' parable had their Empire-sized map consigned to the desert, so too would the results of a model of every last state in the system be consigned to a well-deserved obscurity. The most reasonable course of action, given the need for models that are manageable both empirically and theoretically, is to draw a line between the shapers and the shaped, the planets that draw smaller celestial bodies in their wake and those that are, for the most part, drawn.

<sup>&</sup>lt;sup>22</sup>In Marxism, a "contradiction" refers broadly to the existence of groups with different preferences within a single system. The main contradiction within capitalism existed because of the fundamentally different preferences of the proletariat and the bourgeoisie. See Valdez (1993, 20-21) for an unusually clear discussion.

<sup>&</sup>lt;sup>23</sup>Aspaturian (1990, 7-13); Gurley (1976, 54); Zimmerman (1969, 161-162); Lynch (1987); Zubok and Pleshakov (1996, 95).



Figure 3.1: Comparison of average of power resources for all candidate Great Powers in the European system, 1815-1990. Grey regions indicate periods of general war.

Such a distinction is bound to be offensive, both to sensibilities and to reason. No resident of a small state wishes to believe that his or her country has no impact on international politics, and indeed, there are many examples of smaller states exerting a surprisingly impressive amount of leverage over large ones, by, for example, setting the agenda for international discussions and acting as norm entrepreneurs (Ingebritsen, Neumann, Gstöhl, and Beyer 2006). It is nevertheless true that the structure of the system is overwhelmingly influenced by the actions of a small number of large states that conventionally go by the title either of Great Powers or, during the Cold War, superpowers.

What distinguishes these states from the others? The usual answer is power: a Great Power should have a fair bit of it, more than 10% of the system's capabilities on average according to some authors (Geller and Singer 1998), as well as interests that extend throughout the system in question and, arguably, recognition as a Great Power by others (see Danilovic 2002, ch. 2 and appendix B for a survey). A glance at the distribution of resources relevant to capabilities (Figure 3.1)<sup>24</sup> demonstrates that

<sup>&</sup>lt;sup>24</sup>To be specific, the average percentage of the world total of military personnel, military expenditures,

in only one period, the Cold War, are the capabilities of the powers so dramatically separated as to permit a line to be drawn with great confidence, though the exclusion of Austria following the first World War seems uncontroversial.

The usual answer, therefore, is convincing, up to a point. To move beyond that point we must ask ourselves what makes it so—what general principle makes the 10% rule of thumb a good first cut? The most reasonable answer, it would seem, is Bull and Watson's definition of a system as a situation in which "the behaviour of each [actor] is a necessary factor in the calculations of the others"<sup>25</sup>: Great Powers were accorded the status of Great Powers precisely because they could not be excluded from deliberations regarding the fate of the continent. The 10% rule works fairly well because raw material capabilities correlate strongly, but not perfectly, with this status: the strongest states clearly compelled one another's attention, but the states near the 10% boundary are more questionable. In order to resolve these cases, we need to examine their particulars: factors such as geography and internal cohesion play a substantial role in determining, in this period, whether these powers ended up being necessary factors in the calculations of others.

The main arguments are likely to arise over Italy, the United States, and possibly Prussia prior to German unification, so these cases merit examination. In the years following unification, Italy rivaled Austria-Hungary in terms of its capabilities, but surpassed it in terms of its internal incoherence. In the eleven years that separated the establishment of the United Provinces of Central Italy in late 1859 and the successful siege of Rome in 1870, Italy was focused almost entirely on consolidation and unification of the peninsula. The Italians' success at state consolidation was due in large part to their judicious choice of Great Power allies and often came despite, rather than because of, the outcomes of the battles that they fought.<sup>26</sup> Italy's inability to bring force to bear in a contest with any of the European Powers was apparent as late as 1881, when France established a protectorate over Tunis, 100 miles from Sicily and an obvious target for Italian expansion, and Italy was unable to do more than protest. The case for Italy as a Great Power is often based on its subsequent inclusion in the Triple Alliance, but in fact its participation in that alliance reflected the Italians' realization of their own impotence: as one member of Parliament put it succinctly, "Isolation means annihilation."27

The United States and Prussia follow remarkably similar trajectories in the 19<sup>th</sup> century: at the beginning of the period, by the usual 10% criterion neither qualifies as a Great Power, while at the end of the period both do. Nevertheless, geography

iron and steel production, total population, and urban population—in short, both latent and realized capabilities—over time. Source: Correlates of War data.

<sup>&</sup>lt;sup>25</sup>Bull and Watson (1984, 1).

 $<sup>^{26}</sup>$  Hence the question put to Bismarck by a Russian diplomat: "Why on Earth should Italy demand an increase of territory? Has she lost another battle?" (Wiskemann 2007, 52)

<sup>&</sup>lt;sup>27</sup>The quotations can be found in Langer (1966, 220, 229). See also Sontag (1933, 22-26), who refers to Italy's "[d]ivision of objectives, chaotic internal politics, and limitless ambitions only imperfectly chastened by obvious lack of power." One might argue that Italy's place among the Great Powers of the interwar period is equally questionable, and indeed, it seems the most tenuous of the lot. Out of curiosity, I re-ran the initial interwar analyses described below without Italy, and I must admit that the results differed very little. For that reason, and because omission of a relevant state would have more serious implications than inclusion of an irrelevant one, I left it in.

plays a critical role in distinguishing between the two. When representatives of the members of the Quadruple Alliance arrived in Vienna in the fall of 1814 to prepare for the Congress, no formal distinction between greater and lesser powers existed. Before the Congress formally convened, however, the most powerful states of Europe had arrogated to themselves the authority to decide the most important questions that were to come before the Congress. As Nicolson (1946, 137) put it,

It must be remembered that at that date the distinction between Great Powers and Small Powers—a distinction which even to this day is invidious and delicate—did not exist. It was born during that hurried fortnight between September 13 and October 1.

The Great Powers—four at first, five once Talleyrand succeeded in insinuating France into the group and Spain had been decisively excluded—included Prussia, the weakest of them all. That was the case in large part because, despite its weakness relative to the remaining Powers, its location made it essential from the start in resolving the outstanding territorial issues of the Congress and maintaining the Vienna settlement.<sup>28</sup>

The United States presents precisely the opposite outcome. Despite occasional flourishes of rhetoric like Canning's reference to calling upon the New World "to redress the balance of the Old," the United States did not substantially involve itself in the affairs of the European continent prior to the First World War, nor was it remotely essential for the resolution of conflicts. Indeed, the Monroe Doctrine, the development in the New World to which Canning was referring, which established the New World colonies as being within the American sphere of influence, also established the Old World as being outside of it. Only in 1898, with the defeat of the Spanish in the Spanish-American War, do most scholars credit the United States with having achieved Great Power status,<sup>29</sup> but even then its direct involvement in the security politics of the European subsystem remained virtually nonexistent until the First World War was actually underway. In short, the United States, unlike Prussia, was never a necessary factor in the calculations of the European Powers from Vienna to the first World War.

In the immediate postwar years, the rejection of membership in the League of Nations and America's apparent withdrawal to isolationism seem to argue for its continued exclusion from the ranks of the Great Powers. In fact, however, the League battle can best be seen as a fight between unilateralists and multilateralists, with a small band of "irreconcilables" ensuring that neither could constitute the necessary two-thirds majority. American influence was essential in the signing of the Washington Naval Treaty, the withdrawal of the French after the occupation of the Ruhr in 1923, and the Treaty of Locarno, and direct American involvement in the form of the Dawes and Young plans was the foundation of European recovery. The fact that its involvement was often financial rather than military is a reflection of its strength relative to the shattered European continent: the Americans were able to pressure the French to withdraw from the Ruhr and renounce their right to implement military or territorial sanctions against Germany, and to pressure the Germans to accept the

<sup>&</sup>lt;sup>28</sup>On this point see Peterson (1945).

<sup>&</sup>lt;sup>29</sup>See Danilovic (2002, 229) for a survey.

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Dawes Plan, using financial muscle alone.<sup>30</sup> In short, for the first time the United States was a prominent participant in the politics of the European continent, and its relative material (and especially financial) capabilities in the wake of the devastation of the first World War made it an actor whose behavior had to be taken into account at every step by the European powers.

### Data

Fortunately, throughout these periods data on both the balance of power and the spread of liberal government are readily available, in the form of data from the Correlates of War project and the Polity IV project. The measures used varied across periods, however, for two reasons. The first, and more mundane, has to do with availability of some data in earlier time periods (see e.g. footnote 32). The second has to do with historical context. To put it simply, the world changed substantially over the nearly 200 years under study here, and different aspects of the world became important to states at different times. The most obvious of these differences is apparent in the measures of the structural dimension of power: whereas the Powers at Vienna were, and largely remained, concerned about the equality of the distribution of latent more than realized capabilities, the interwar Great Powers focused overwhelmingly on Germany's share of the system's realized military capabilities, and the Americans and the Soviets worried about a distribution of military capabilities that included nuclear weapons.<sup>31</sup> Confusingly, each of these quantities was referred to at the time as the "balance of power."

What I have done in the coding of the data, therefore, is to retain as much similarity of measures as the history of these three periods permits, but not more. Most of the concepts are common to all three periods, but their incarnations do differ, sometimes radically. In this way I hope to maintain conceptual continuity without sacrificing historical diversity.

### Capabilities and Arms Levels: The Correlates of War

In the 1815-1914 period the Correlates of War data were used to construct a rough measure of the balance of latent capabilities in the following manner: Both iron and steel production and urban population were divided by total Great Power iron/steel production and urban population, and the resulting fractions were averaged. If a state possessed 24% of the total Great Power iron and steel production and 30% of total Great Power urban population, therefore, it received a score of 27%.<sup>32</sup> The

<sup>&</sup>lt;sup>30</sup>Here I rely on my own related research, summarized in Braumoeller (2009), as well as Cohen (1987, 32-33) and Costigliola (1984, 120-122) for the Ruhr crisis and Kolb (1988, 61) and Jones (1981, 36-37) for the Dawes Plan in Germany.

<sup>&</sup>lt;sup>31</sup>It seems more than likely that the speed with which outcomes were determined in warfare dictated this change: as military technology improved and increased the odds that wars, once started, would be resolved relatively quickly and decisively, the balance of realized rather than latent power became the quantity of greatest interest for maintaining stability.

<sup>&</sup>lt;sup>32</sup>This procedure has become standard in quantitative studies of IR, which usually average a wider range of variables; in this case, the distinction between latent and realized power makes a compelling case for

balance of power was then calculated as the standard deviation of the distribution of the Great Powers' scores on this latent power measure. Realized capabilities, by contrast, were calculated as the average of the state's percentages of total Great Power military personnel and military expenditures.

In the interwar period, the metric of realized capabilities remained the same, and the measure of the balance of power became simply Germany's realized capabilities as a percentage of all Great Power realized capabilities. Because overall militarization was the perceived cause of the previous war and the focus of arms control efforts in the interwar period, I simply used the total military expenditures of the Great Powers as a measure of arms levels. I made two changes to the measure of latent capabilities. First, national energy consumption, as a proxy for level of industrialization, was incorporated into the measure in the same manner as iron/steel production and urban population. Second, because of the heightened importance of finance in the security politics of the 1920s in particular (when, for example, the Americans were able to convince the French to withdraw from the Ruhr and undermine German opposition to the Dawes Plan by threatening to restrict access to American financial resources),<sup>33</sup> I also incorporated a measure of the state's financial strength, in the form of end-ofyear gold reserves, derived from the League of Nations Statistical Yearbook, Gold and Foreign Reserves.<sup>34</sup> Again, each state's percentage of the overall Great Power reserves was calculated and averaged into the latent power measure.

For the Cold War period, I retained the urban population, iron/steel production, and energy consumption dimensions of the measure of latent capabilities. I also incorporated a measure of nuclear firepower, in the form of Western and Eastern stockpiles of nuclear weapons, measured in warheads (Norris and Arkin 1997). The measure served in two capacities. First, because arms control efforts became focused much more intensively on nuclear arms during the Cold War period, I used the total number of warheads as a measure of overall arms levels. Second, because of their disproportionate impact on the conduct of warfare, I used a weighted measure of conventional and nuclear armaments as a metric of realized power. The balance of power variable for this period was simply the difference between Western-bloc and Eastern-bloc countries' realized power, scaled to lie on the interval between 0

analyzing the numbers separately. Unfortunately, energy production could not be used in this measure because Russian energy figures are missing prior to 1859 and no method of backward extrapolation that I tried produced remotely credible numbers.

<sup>&</sup>lt;sup>33</sup>On the Ruhr crisis see Cohen (1987, 32-33) and Costigliola (1984, 120-122); on the Dawes Plan see e.g. Sontag (1933, 360-361) and Jones (1981, 36-37).

<sup>&</sup>lt;sup>34</sup>I am grateful to Beth Simmons for suggesting this measure. I utilized the 1926, 1931, 1939, and 1941 volumes. Estimates varied across yearbooks at times, sometimes substantially, so where possible I used the more recent estimates, which tended to be more stable. The accounts were listed in national currencies, so I converted to dollars prior to normalization, using the exchange rate estimates from December of the relevant year, again from the *Statistical Yearbook*. Also, some data were missing, and some were unrepresentative: I extrapolated backward from 1920 to get the 1918-19 data and forward from 1936 to get the Soviet data for 1937-39. I also found a pronounced spike in Soviet gold reserves in 1923 to be less than credible; given the *chervonets* currency reform of that year and the fact that other sources (e.g. Barnett 1994) suggest that steady growth in Soviet reserves should have been evidenced, I simply interpolated between the 1922 and 1924 values. Finally, because the use of financial resources requires a minimal level of government coherence, I concluded that the (already minimal) reserve levels of 1920-21 for the Soviet Union and those of France in 1940 were unrepresentative of their ready financial resources and coded them as missing instead.

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(complete Eastern preponderance) and 1 (complete Western preponderance).<sup>35</sup>

One additional note is worth mentioning: The estimated coefficients of the statistical model can essentially resolve any purely multiplicative scaling issue (as when, for example, expenditures in the millions or billions of dollars are used as a measure of arms levels, but preferences regarding arms levels are measured on the unit interval). The basic model does, however, assume that zero means zero-in other words, that the zero point of the dependent variable corresponds to a conceptual zero for the quantity being measured. For most of the variables, this assumption is at least plausible: a standard deviation of zero would correspond to perfect equality among the powers, a Cold War power balance of zero would correspond to complete American superiority, and so forth. Nevertheless, to the extent that the data permit this is an assumption worth relaxing if possible. I did so by rewriting the model in order to permit the scale of the structural dimensions of the system to be estimated rather than assumed, thus mitigating this potential difficulty.<sup>36</sup> Doing so has the advantage that it eliminates guesswork, but it also has two distinct disadvantages: it nearly doubles the number of coefficients that must be estimated in the actor-level equations (and as a result renders the interwar model inestimable due to lack of information), and it dramatically increases multicollinearity issues. Even so, the results are on the whole remarkably similar to those of the unscaled model. For that reason, and in order to save a substantial amount of space, the results of the simpler model are the ones presented here and in the Appendix.

### The Balance of Ideology: Polity

The measure of the spread of liberal government was derived from the Polity IV project. In the 19<sup>th</sup> century, with a few relatively minor exceptions, a state's position between liberalism and legitimism corresponded reasonably well to its position on the Polity scale between democracy and autocracy. In the interwar period, it became crucial to distinguish between left-authoritarian and right-authoritarian regimes, so I reweighted the scale so that the extremes corresponded to left- and right-authoritarianism and the center corresponded to liberal democracy. To the extent that one extreme found the other more ideologically sympathetic than democracy, the measure will be an imperfect one, but happily there was little love lost between Fascists and Nazis, on the one hand, and Communists on the other, throughout most of the period. During the Cold War, the continuum from democratic to authoritarian

<sup>&</sup>lt;sup>35</sup>Prior to the formation of NATO and the Warsaw Pact, a measure of the individual superpower's capabilities, rather than that of the entire alliance, was utilized. To be precise, the material capabilities measure consisted of three components—percentage of systemic military expenditures, percentage of military manpower, and percentage of nuclear warheads—weighted equally. Interestingly, this is not an entirely inconsequential decision: when I used a measure of realized capabilities that consisted entirely of nuclear warheads, the results of the statistical model improved noticeably. My sense is that analysts should be guided by theory but not bound by it, however, and my reading of Cold War history would not support the claim that the balance of conventional forces was entirely immaterial to decisionmakers.

<sup>&</sup>lt;sup>36</sup>So, for example, rather than starting with an equation such as  $\dot{a}_i = \sum_m \omega_{im} [v_i(c_{im}) - s_m]^2 - a_i$ , one would start with  $\dot{a}_i = \sum_m \omega_{im} [v_i(c_{im}) - \gamma_{0m} - \gamma_{1m}s_m]^2 - a_i$ , which permits  $s_m$  to be scaled by  $\gamma_{0m}$  and  $\gamma_{1m}$ . The addition of two parameters might seem straightforward, but given that there are *m* structural dimensions and that the right-hand side must be multiplied out to produce terms for estimation, rescaling generally creates a large number of additional parameters to be estimated.

ian once again captures, in a reasonably accurate fashion, the ideological spectrum between communism and democratic capitalism. In each period, the measure of the balance of ideology is nothing more than the average of the nonmissing Polity scores for all European states in the period, recoded as I have just described them.<sup>37</sup>

### Worldviews and Levels of Activity: The Historians' Survey

The main hurdle involved in estimating a statistical model was obtaining the remaining data, in particular the extent to which states believe a given dimension of the system to be of importance and their preferred state of the world along that dimension ( $\omega$  and v[c], respectively). The latter quantity, v[c], is analogous to an ideal point, the estimation of which has received considerable attention in recent years.<sup>38</sup> Unfortunately, the data necessary for such an exercise are difficult if not impossible to come by for a cross-national study that spans seven states over parts of nearly two centuries. It might be possible, for example, to utilize a content analysis of party platforms to estimate a party's ideal points, but even given the conceptual difficulties of such an enterprise,<sup>39</sup> doing so would rule out nondemocratic states, which comprise a substantial fraction of the Great Powers over that period. For a period, French diplomats were given documents that described the French outlook on world affairs in considerable detail; unfortunately for social science, this practice did not persist, nor did it find its way into the foreign ministries of other states. Unfortunately, the data problem is most acute prior to World War II, when a multipolar world created the potential for the most interesting tests of the model.

To overcome the problem of obtaining comparable cross-national data over long periods of time, I conducted an expert survey of historians. The sample of historians was drawn from four sources: editorial boards of major history journals; book reviews and the "Other Books Received" section of the *American Historical Review*, dating back to 1993; graduate exam reading lists from an array of top history departments; and the membership rolls of the American Historical Society.<sup>40</sup> For each candidate, a research assistant did a search of past publications to determine whether the historian in question had written on the topic of any Great Power's relations with other Great Powers, belief systems or worldviews of the citizens or elites of a given

<sup>&</sup>lt;sup>37</sup>Non-Great Powers were typically not seen as directly relevant to the balance of power, with some strategically located exceptions. On the other hand, the spread of liberalism in those states was seen as a matter of grave concern to the conservative powers, as the first few Congresses attest. Hence the use of all European states in the latter measure but only Great Powers in the former. It is worth noting that I also calculated a weighted measure of liberalism in which the Polity score of each state was weighted by its fraction of the European population. The general trend differed little, and the former measure seemed conceptually more appealing.

<sup>&</sup>lt;sup>38</sup>See e.g. Poole and Rosenthal (1997), Martin and Quinn (2002), Lewis and Poole (2004), and Peress (2009).

<sup>&</sup>lt;sup>39</sup>Foremost, of course, would be the question of whether words are truly representative of worldviews, and whether the extent to which this is the case varies across states. One also must wonder how the worldviews of parties translate into state-level worldviews.

<sup>&</sup>lt;sup>40</sup>The latter group proved to be more heterogeneous than anticipated, so the sample was restricted to professional historians, i.e., those who had received a graduate degree and were employed in history departments. Three exceptions were made for graduate students who were at least at the dissertation stage and whose work was so directly relevant to the project that excluding them from the sample seemed pointless.

	19 <sup>th</sup> Century	Interwar Period	Cold War	
Balance of power	Standard deviation of latent capabilities of GPs	German percentage of GP realized capabilities	Diff. between US and Soviet realized capabilities	
Arms levels	N/A	Total military expenditures	Mil. spending + nuclear warheads	
Balance of ideology	Average regional Polity score	Average regional Polity score, rescaled	Average regional Polity score	
Latent capabilities	Urban population Iron/steel production	Urban population Iron/steel production Energy consumption EOY gold reserves	Urban population Iron/steel production Energy consumption	
Realized capabilities	Military expenditures Military personnel	Military expenditures Military personnel	Military expenditures Military personnel Nuclear warheads	
Worldviews	Assessed via survey of diplomatic historians			
State Activity	Assessed via survey of diplomatic historians			

Table 3.1: Measures by period.

Great Power, major domestic divisions or the workings of domestic political institutions within a given Great Power, or the general history of a given Great Power or set of Great Powers.<sup>41</sup> An initial draft of the survey was sent to a panel of five historical experts who offered valuable suggestions for revision as well as valuable insights into the ontological outlooks of historians.<sup>42</sup>

The survey asked respondents to gauge the quantities of interest and chart any changes in them over time. For example, to gauge the ideal points of leaders and their constituencies (defined as "the people legally empowered to emplace or remove" their leaders), respondents were asked, "If political elites could have had their way, what would the distribution of power in Europe have looked like? What about the preferences of their constituency, if such a group existed?" Answers for both leaders and constituents ranged from 1 ("All major states would have equal capabilities") to 7 ("Even large inequalities of capabilities were fine as long as one state could still balance against threats"), along with "Don't know" and (in the case of constituencies)

<sup>&</sup>lt;sup>41</sup>I am most indebted to Jeff Rosenfeld and Yevgeniy Kirpichevsky, without whose tireless research assistance this would have been an even more enormous task.

<sup>&</sup>lt;sup>42</sup>For example, one historian suggested that the use of the terms "elites" and "constituencies" was both overly vague and reductionist. I was able to work out language that was more precise and useful, but I was unable to do much to assuage the latter concern, as these constructions are central to the theory. Indeed, the discipline of political science in general is probably overly reductionist from an historian's point of view.

"Inapplicable."<sup>43</sup> Analogous questions asked about the distribution of political ideology and overall arms levels, when applicable. To measure  $\omega$ , the respondents were then asked, "As a measure of the general importance of the distribution of power in Europe to the national security of the state, how wide or narrow was the range of outcomes considered acceptable by political elites and (if applicable) by their constituents?" Answers ranged from 1 ("Nearly any distribution of capabilities would have been acceptable from the point of view of national security") to 7 ("Only an extremely narrow range of outcomes would have been acceptable; anything outside of that range would constitute a threat."), along with the same "Don't know" and "Inapplicable" options. Similar questions gauged opinions about the worldviews of leaders and constituencies on the distribution of ideas.

The activity variable, in a more contemporaneous study with more available data, might have been operationalized using events data, but coverage of all actors during all periods would be obviously problematic, and the available coverage would raise issues of generalizability.<sup>44</sup> Other indicators of activity were potentially available, such as alliances and militarized interstate disputes (MIDs), but no individual data series or combination of data series produced an indicator with anything like adequate surface validity.<sup>45</sup> It seems likely that the reason for this outcome has to do with the fact that the behavioral data are not always consistently related to the underlying concept that they are meant to capture. In a multilateral state, an absence of alliances indicates low levels of activity; in a highly unilateral state, however, an absence of alliances could be associated with any level of activity. A state that relies on strong allies might spend little on its own defense even if it is highly active. A state might be very active for ten years but only experience MIDs in two of those ten years, so the absence of MIDs is an ambiguous indicator.<sup>46</sup> Worse, many of these behaviors may (or may not) be indicative, to some degree, not of an increasingly active foreign policy but rather of an attempt to maintain internal order during an era of uprisings and revolution. In short, the relationship of the behavioral indicators to state activity is highly contextual, depending heavily on the state and period in question.

Expert-generated data are not uncommon in the study of political science.<sup>47</sup> Indeed, expert data have even been shown to be preferable to existing, objective data: Benoit and Laver (2007), for example, compare the results of the Comparative Man-

<sup>&</sup>lt;sup>43</sup>I attempted to ensure that the lower end of the scale corresponded to a meaningful zero point in the data, for the reasons mentioned above.

<sup>&</sup>lt;sup>44</sup>On events data see Merritt, Muncaster, and Zinnes (1994) and Schrodt (1994). One alternative would have been a study of the post-World War II period, for which events data might reasonably have been obtained, but the loss of more than half of the data for the sake of a single indicator struck me as unwise if an alternative was available.

<sup>&</sup>lt;sup>45</sup>See the Appendix of Braumoeller (2008) for details of one such combination, a factor analysis of data from the Correlates of War project—specifically, military personnel, military expenditures, number of allies, number of European opponents in militarized interstate disputes, and the sum of the hostility levels of European MIDs.

<sup>&</sup>lt;sup>46</sup>It might be possible to use a moving average rather than a yearly measure to mitigate this problem, but doing so would induce massive serial correlation, produce measures that are highly dependent on the number of years used, arbitrarily, for the average, and be inherently unable to pick up transition points—in all, a bad trade.

<sup>&</sup>lt;sup>47</sup>See e.g. Budge (2001) on expert data regarding political party positions, and Bueno de Mesquita (1998) on expert data on ideal points.

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ifesto Project, a detailed and professional attempt to derive left-right party positions from content analysis of party platforms, to those of an expert survey on the same subject and find the latter to be more accurate. There are good reasons to consider the use of expert-generated data in international relations as well, the main one being the fact that survey data are designed to measure *exactly* the quantity of interest, while behavioral data are often very indirectly or imperfectly related to it.

Given that an expert survey had to be conducted to gather data on the worldview questions, therefore, I added an item about the general level of activity of the state, designed to capture much the same concept that events data measure, except without a directional component<sup>48</sup> ("Taking into account all forms of activity designed to increase national security, how active would you say the state's foreign policy was during this period?") Given the unusual amount of leeway granted the respondents, the reliability of the measure—the degree to which different observers asked to measure the same quantity would produce the same result—was worth ascertaining and proved to be acceptable.<sup>49</sup>

The main concern regarding survey-generated data of this sort is validity—whether they correspond to known behavioral measures that capture similar concepts. Events data are the closest analog, but of the three periods in question events data are available for only one, the Cold War. A reasonable way to address this concern would be to ascertain whether the survey data are similar enough to existing events data to serve as instruments for them. To do so, I compared the US and Soviet activity series to two plausibly similar events series generated from Edward Azar's Conflict and Peace Databank (COPDAB; Azar 1982). In both cases the degree of similarity was well beyond conventional standards for a sufficiently strong instrument.<sup>50</sup>

The survey permitted respondents to select the state(s) about which they considered themselves to be most knowledgeable. As a result, unfortunately, more data was gathered on 20<sup>th</sup> -century states than on 19<sup>th</sup> -century states, so a second wave of the survey was put into the field and respondents were asked specifically to address questions about states in earlier periods when possible. Finally, two of the respondents suggested that the questions about the Cold War could usefully have been augmented with an additional question about arms control, and in retrospect I agreed, so a third

<sup>&</sup>lt;sup>48</sup>Events data typically measure the activities that one state takes that are directed *toward* another state. This is a substantial difference between the two indicators; it also suggests that events data run the risk of underrepresenting certain forms of activity, such as extraordinary defense spending, that may not readily be attributable to a reaction against a particular state.

<sup>&</sup>lt;sup>49</sup>Cronbach's Alpha measures inter-coder reliability, with values below 0.60 considered clearly problematic, those in the 0.60-0.69 range borderline, 0.70-0.79 acceptable, and 0.80 and above very strong. I calculated the average of all of the alpha statistics for all of the country-periods in the survey, weighted by the number of coders in each. The result, an aggregate Cronbach's alpha of 0.72, falls into the unambiguously acceptable range.

<sup>&</sup>lt;sup>50</sup>Cameron and Trivedi (2005, 96-97, 104-105) discuss instruments and suggest, as a rule of thumb, that the F-statistic for whether coefficients equal zero in a regression of the original activity variable on the instrument should exceed 10. In this case I generated two series—one of all events, rescaled by intensity in accordance with the codebook (p. 37), and one of only negative events, rescaled in the same manner, in light of the potentially ambiguous meaning of positive events Altfield (1984). Regardless of which is taken to be the actual activity series, the survey instrument serves as an acceptable instrument, with a strong positive correlation ( $\rho > 0.6$  in the case of the all-events series) and F-statistics well above the cutoff of 10 (25.64 for the negative-events series, 35.41 for the all-events series).

"mini-survey" was subsequently put into the field to ask follow-up questions regarding that issue area. In the end, there were 175 responses to the survey, each covering one Great Power over a span of 50 or (in the case of the interwar period) 40 years. Given that there were 18 such country-period combinations, there were an average of nearly ten respondents per data point. The data were then cleaned and averaged<sup>51</sup> to produce a data set containing one quantity per question per country-year.

Now that I have described the data, I move on to the task of interrogating them. Though what follows is couched in the standard language of hypothesis-testing for the sake of convention,<sup>52</sup> I prefer to think of it as an exercise in ascertaining whether the reality implied by the model provides a reasonable match to the reality described by the data. In some cases the techniques used will be the same: the question of whether zero falls within the 95% confidence intervals of the sampling distribution of a coefficient is an interesting one in both exercises, and standard frequentist statistical techniques provide the same answer. Nevertheless, interrogating the data is a fundamentally descriptive enterprise that admits a considerably wider range of questions, and potentially a richer set of descriptions, than standard hypothesis testing.<sup>53</sup>

## Nested Politics and Structural Change

Having drawn some general lessons from the data about the relationship between constituency and elite worldviews, we can now address the central question: the extent to which the dynamic model of nested politics and structural change maps to the real world in the three systems under consideration. Often, studies of systems of equations rely entirely on ascertaining the probability that the data could plausibly be the product of random chance. This is, and should be, the core of the study, but in addition I examine the substantive impact of the variables and, in the following chapter, trace the process by which they explain outcomes in three historical cases. I will also examine the correlations among the error terms of the actor-level equations, because these quantities can give us some clues as to whether or not states engage in contemporaneous coadjustment to within-period "shocks," or innovations. Such adjustments suggest that states are making some attempt to counter (or enhance) the impact of one another's actions on the structure of the system, rather than entirely waiting for that impact to play itself out.

<sup>&</sup>lt;sup>51</sup>One result seemed somewhat anomalous: answers to the question about overall levels of activity in Prussia in the early 19<sup>th</sup> century produced a flat line until the early 1860s. This was a case in which a minimal number of historians had offered responses (to be precise, two)—but despite the fact that the respondents were different individuals answering in different waves of the survey, they both charted the *same* trend, including both the flat line and the upward tick around 1860. In the end, I decided not to second-guess the respondents.

<sup>&</sup>lt;sup>52</sup>See Gill 1999 for a trenchant critique.

<sup>&</sup>lt;sup>53</sup>My own sense is that, given observational data, all that we can do is describe. The position is summarized elegantly by Achen (1982, 77-78): "No matter how sophisticated, social science data analysis simply describes. That suffices. Given any satisfactory description, a provisional explanation can be constructed. Its validity is neither completely certain nor utterly dubious. Like almost all knowledge, its credibility depends, not on its resemblance to an idealized physics experiment, but on its competitiveness with other explanations. It will stand until another can be created that is equally simple, equally consistent with other knowledge, and more successful with the data."

### Derivation

First, I demonstrate how the general theoretical model in Chapter 2 can be transformed into an empirical model suitable for estimation, given the information above. Recall that the form of the model was derived from the structure of the system and the main actors—specifically,

$$\dot{s}_m = \sum_i \pi_i \omega_{im} a_i [v_i(c_{im}) - s_m]$$
(3.1)

and

$$\dot{a}_{i} = \sum_{m} \omega_{im} [v_{i}(c_{im}) - s_{m}]^{2} - a_{i}$$
(3.2)

for all Great Powers *i* and all structural dimensions *m*. These translate quite directly into estimable statistical equations. In fact, the equations resemble error-correction models of the sort described by Durr (1992), which leverage the strengths of differenced time series (namely, minimization of autocorrelation and unit root issues) while incorporating some information about levels in the adjustment term on the right-hand side.<sup>54</sup> The nonlinearity of the right-hand side makes them a bit more complex than a standard error-correction model, however. For example, once the right-hand side has been expanded and coefficients have been appended to each term for estimation, the equation for the UK in the 19<sup>th</sup> century would be

$$\dot{a}_{UK} = \beta_{1}\omega_{_{UKBOP}}\nu_{_{UK}}(c_{_{UKBOP}})^{2} + \beta_{2}\omega_{_{UKBOP}}[2\nu_{_{UK}}(c_{_{UKBOP}})s_{_{BOP}}] + \beta_{3}\omega_{_{UKBOP}}s_{_{BOP}}^{2} + \beta_{4}\omega_{_{UKLIB}}\nu_{_{UK}}(c_{_{UKLIB}})^{2} + \beta_{5}\omega_{_{UKLIB}}[2\nu_{_{UK}}(c_{_{UKLIB}})s_{_{LIB}}] + \beta_{6}\omega_{_{UKLIB}}s_{_{UR}}^{2} + \beta_{7}a_{_{UK}},$$
(3.3)

where  $a_{_{UK}}$  denotes the level of activity of the UK,  $\omega_{_{UKBOP}}$  denotes the salience of the balance of power to the British,  $v_{_{UK}}(c_{_{UKBOP}})$  represents the British ideal point with regard to the balance of power,  $s_{_{BOP}}$  denotes the present balance of power, *LIB* subscripts refer to the balance of political ideology rather than to the balance of power, and the  $\beta$ s are coefficients to be estimated.<sup>55</sup> Four parallel equations describe the behavior of France, Austria/Austria-Hungary, Prussia/Germany, and Russia. Similarly, the equation for the balance of power would be

<sup>&</sup>lt;sup>54</sup>Normally the dependent variables, if non-stationary, are differenced to induce stationarity; in this case, the dependent variables are already differenced, and the resulting series demonstrate no evidence of serial correlation, moving averages, or unit roots.

<sup>&</sup>lt;sup>55</sup>In principle, it is rarely desirable to estimate an interactive model without including all of the lowerorder terms as well. In this case, however, there are both theoretical objections (theory suggests these particular multiplicative terms and no others, not standard interaction terms with lower-order coefficients) and practical ones (a mindbogglingly large number of coefficients and insurmountable multicollinearity) to doing so.

$$\dot{s}_{BOP} = \beta_{1}\pi_{UK}\omega_{UKBOP}a_{UK}v_{UK}(c_{UKBOP}) + \beta_{2}\pi_{UK}\omega_{UKBOP}a_{UK}s_{BOP} + \beta_{3}\pi_{Fr}\omega_{FrBOP}a_{Fr}v_{Fr}(c_{FrBOP}) + \beta_{4}\pi_{Fr}\omega_{FrBOP}a_{Fr}s_{BOP} + \beta_{5}\pi_{Au}\omega_{AuBOP}a_{Au}v_{Au}(c_{AuBOP}) + \beta_{6}\pi_{Au}\omega_{AuBOP}a_{Au}s_{BOP} + \beta_{7}\pi_{Pr}\omega_{PrBOP}a_{Pr}v_{Pr}(c_{PrBOP}) + \beta_{8}\pi_{Pr}\omega_{PrBOP}a_{Pr}s_{BOP} + \beta_{9}\pi_{Ru}\omega_{RuBOP}a_{Ru}v_{Ru}(c_{RuBOP}) + \beta_{10}\pi_{Ru}\omega_{RuBOP}a_{Ru}s_{BOP},$$
(3.4)

with two terms for each of the five Great Powers, and a second, parallel equation would describe the course of political liberalization on the continent. Dummy control variables were also added for exogenous "shocks" to ensure that these events did not distort the general trend.<sup>56</sup>

Because they are derived directly from the theoretical model, these equations represent direct tests of the actor-level and structural hypotheses from Chapter 2. A test of the significance of the coefficients in Equation 3.3 is a test of the actor-level hypothesis,

H<sub>A1</sub>: International structure prompts state security activity in proportion to the product of salience and dissatisfaction with the status quo,

in the case of Great Britain in the 19<sup>th</sup> century; tests of the significance of the coefficients in similar equations test the hypothesis for other Great Powers in other time periods. Similarly, a test of the significance of the coefficients in Equation 3.4 is a test of the structural hypothesis,

H<sub>St1</sub>: State security activity alters international structure in proportion to the product of state security activity, state latent capabilities, salience, and dissatisfaction with the status quo,

in the case of the balance of power in the 19<sup>th</sup> century.

Finally, recall Morgenthau's argument from Chapter 2 that "the element of power as the immediate goal of the policy pursued... is concealed by ideological justifications and rationalizations." This argument has a surprisingly straightforward statistical interpretation, one that can be tested easily. In statistical terms, it implies that any variation in balance-of-ideology variables that correlates with state activity should also correlate with balance-of-power variables. (To continue the substantive example, the only states that prove to be attractive targets for regime change should also yield demonstrable balance-of-power advantages.)

To illustrate this point, in Figure 3.2 the circles represent variation in each of three variables—the balance of power, the balance of ideology, and outcomes, whatever

<sup>&</sup>lt;sup>56</sup>These include the Crimean War (in the equations for the UK, France, and Russia), the first year of World War I and of World War II, the first year of peace after each of these years, the first year of the Great Depression, and the first year after the fall of Eastern Europe and the end of the Cold War. These variables are included in order to ensure that these events do not distort the general trends that the model attempts to describe.

they may be (in this study, states' security-related activity), and the overlaps between and among them represent covariation or correlation. The realist argument about the pursuit of ideological goals in foreign policy boils down to an argument that the rightmost shaded area should be a null set: the only correlation between securityrelated activity and ideology should also be shared with the balance of power (i.e., the dark grey region in the center).<sup>57</sup>

Crucially, in regression equations of the sort reported above, any variation associated with multiple independent variables as well as the dependent variable (the dark grey region) does not influence the results at all. The model coefficients *only* reflect covariation that is *unique* to the independent variable in question and the dependent variable (the two light grey regions).<sup>58</sup> Therefore, in these results, the coefficients on the balance-of-ideology variables capture only the influence of that portion of the balance of ideology that is *not* correlated with the balance of power.

Therefore, the realist argument that states only react to and shape the balance of ideology to the extent that it serves their balance-of-power purposes suggests a very simple hypothesis: If it is correct, the model above should be reducible to a much simpler model, one in which the coefficients on all of the variables that capture the effects of state activity on the balance of ideology and vice-versa are zero.<sup>59</sup> In that manner the realist hypothesis

 $H_{R1}$ : The balance of ideology will have no impact on state behavior, independent of the impact that it has when its prescriptions correlate with those of the balance of power.

can be tested.

### Estimation

A perfect method for estimating systems of equations has yet to be devised. Ordinary least squares coefficients are inconsistent if endogenous RHS variables are correlated with the error term; moreover, they suffer from simultaneous-equation bias if error terms are correlated across equations. Three-stage least squares (3SLS), a fully systemic estimator, addresses these issues but estimates hinge critically on the quality of instruments, which is often mediocre at best. Full-information maximum likelihood (FIML) resolves the latter issue, but as with any systemic estimator, a misspecification

<sup>&</sup>lt;sup>57</sup>One version of the realist argument is that ideology can drive policy as long as it does not directly contradict realism; Mearsheimer (2001, 46), for example, writes that "states can pursue [non-security goals] as long as the requisite behavior does not conflict with balance-of-power logic." This argument differs from the classical one in two ways. First, the correlation among realist variables, ideological variables, and behavior is only of concern if the first two are negatively correlated, which the classical realists tend to assume will not be the case; second, correlation between an ideologically-based impetus to act that is *not* correlated with power motivations and behavior is unproblematic. Simply put, unless ideological motives directly contradict power motives, they are not ruled out as a source of behavior. The test below is not relevant to this form of the argument, but on the other hand, the argument rules out so little that a direct test of it is difficult to devise.

<sup>&</sup>lt;sup>58</sup>See Kennedy (1985, 46-47) on this point.

<sup>&</sup>lt;sup>59</sup>In concrete terms these would be  $\beta_4 - \beta_6$  in Equation 3.3 and each of the other actor-level equations, and all of the coefficients in the balance of ideology equation.



Figure 3.2: Covariation in power, ideology, and outcomes.

in one part of the system can have repercussions throughout the remaining equations; moreover, the technique requires an additional assumption (normality of error terms) which, to the extent that it is not met, is another potential source of error. Which method is least flawed is difficult to predict in any particular case.<sup>60</sup>

Moreover, the theoretical model itself, while it translates easily into a time-series model, has some features that make it inherently hostile to estimation. Identification issues and the fundamentally interactive nature of the model preclude estimation of coefficients on the individual variables.<sup>61</sup> Estimation of coefficients involved generating aggregate terms, such as the ones derived in Equations (3.3) and (3.4), and estimating a coefficient for each. Bivariate correlations among these aggregate terms were often very high by construction. Multivariate correlations—the correlations between an individual term and the remaining terms in the equation—were of course worse still, ranging in the 19<sup>th</sup> -century Prussian case from 0.8928 to 0.9969. Multivariate correlations of this magnitude make parameter estimation substantially more uncertain, to say the least. Those seeking to gauge the statistical significance of the estimates should therefore expect rather expansive standard errors.

Research utilizing systems of equations typically evaluates the statistical signifi-

<sup>&</sup>lt;sup>60</sup>Limited-information techniques are those, like OLS, that estimate coefficients for equations one at a time; full information techniques, like three-stage least squares and FIML, estimate them simultaneously. The full-information maximum-likelihood technique utilized here is equivalent to the maximumlikelihood version of a three-stage least squares technique, save that the model's considerable endogeneity required that the instruments be estimated via OLS rather than maximum likelihood. The main advantage over 3SLS is that the maximum-likelihood routine offers robust standard errors. For that reason, and due to the fact that it is a full-information technique, I report the FIML results.

<sup>&</sup>lt;sup>61</sup>I considered a log-additive model, but Monte Carlo trials suggested strongly that estimation would be unreliable at best.

cance of the results at the level of the equation rather than at the level of the individual coefficient; see Brown (1993) and Goldstein and Freeman (1990, Appendix B) for examples. The reason, simply, is that coefficient-level significance is of little interest when testing a system of equations: the equation as a whole is generally more likely to capture a coherent concept of interest. In this case, for example, the impact of the structure of the system on British activity is an equation-level question, whereas the impact of  $\omega_{UKBOP} v_{UK} (c_{UKBOP})^2$  on British activity is an equation-level one.<sup>62</sup> Following this tradition, I have compiled the equation-level results in Table 3.2.<sup>63</sup> It should be emphasized that these results reflect the joint significance of *only* the variables derived from the model—not the control variables, and not the constant term, because those coefficients are not, strictly speaking, relevant to the question of the model's statistical significance. Nevertheless, the high degree of correlation among these model terms in many cases, combined with their relatively small number in any given equation, makes this a challenging test.

### Results

It comes as something of a surprise, therefore, that the partial adjustment model performs as well as it does across the board. The summary statistics in the first three rows answer the question of whether the various dimensions of the structure of the system are more responsive to the security policies of the Great Powers than we would expect them to be by chance, and almost without exception the answer is yes.

The only exception is the balance of ideology in the 19<sup>th</sup> century, and it may tell us something interesting about the world. In the 19<sup>th</sup> -century model, the equation that relates state activity to the balance of ideology is not, on the whole, distinguishable from what we would expect to see by chance despite a lesser multivariate correlation, though it is reasonably close to standard levels of statistical significance. What this fact suggests is that the balance of ideology either did not respond or responded only imperfectly to Great Power policies throughout the century. The power projection capabilities of the Great Powers was weakest in this period, and they often had considerable difficulty in suppressing revolution. Moreover, the impetus for revolution quite often came from the smaller states themselves. In short, with regard to the balance of political ideology in the 19<sup>th</sup> century the results suggest that the system was more independent of Great Power influence than other structural dimensions were at that time or in other periods. Also, importantly, it demonstrates the fact that the model as a whole *could* be falsified—but in the vast majority of cases is not.

<sup>&</sup>lt;sup>62</sup>Moreover, even for a small system of equations such as this one, the number of coefficients to be examined is quite large—to be specific, 183 coefficients were estimated across seven Great Powers and three time periods, not counting constants and control variables. Even if the complexity of the model did not make interpretation of the individual coefficients convoluted, their sheer number would rapidly render them mind-numbing. In any event, full model results are available in the statistical appendix and clearly bear out the latter intuition.

<sup>&</sup>lt;sup>63</sup>The first and third period results were calculated using maximum likelihood, with robust standard errors. The interwar model failed to converge using likelihood methods, so the results are based on methodof-moments estimation instead. Accordingly, the numbers in the Table represent F-statistics for the interwar period and  $\chi^2$  statistics for the other two periods. Full results for all models can be found in Table A.7 in the statistical appendix.

	19 <sup>th</sup> Cen.	Interwar	Cold War
H <sub>St1</sub> : <i>Great Power security activity</i> → Balance of Power Balance of Ideology Arms Levels	32.84*** 13.82	10.78*** 16.89*** 24.29***	8.98* 34.24*** 139.65***
H <sub>A1</sub> : Structure → security activity of UK France Austria/A-H Prussia/Germany Russia/USSR Italy USA	20.10*** 18.79*** 24.65*** 18.56** 21.40***	22.99*** 51.10*** 21.46*** 109.56*** 19.25*** 75.21***	32.37*** 11.62
H <sub>R1</sub> : <i>Reject reduction of model to…?</i> Power-only model Ideology-only model	132.76*** 221.41***	20.82*** 49.03***	40.70*** 319.73***

Table 3.2: Structures and agents: reciprocal impact. Numbers represent joint significance of variables derived from model, all equations. Legend: \*\*\*Pr < 0.001; \*\*Pr < 0.05; \*Pr < 0.10.

The next set of summary statistics in the Table answer the converse question: whether the security policies of the Great Powers are more responsive to the structure of the international system than we would expect them to be by chance. Here, again, the answer almost without exception is that they are. The results are quite strong, statistically speaking, and hold across virtually all Great Powers in all time periods. The exception is the United States in the Cold War period, and in this instance seeking a substantive explanation is most likely unwarranted: the multivariate correlation among the model-related independent variables was so strikingly high (0.9998) that statistical significance could hardly be expected.<sup>64</sup>

<sup>&</sup>lt;sup>64</sup>Because the model predicts coefficient sign but not magnitude, and because the standard errors are often influenced by multicollinearity, the inferences that can be drawn from coefficient signs will be fairly noisy; still, though the predictions are not perfect, they nevertheless do a much better job than we would expect by chance, producing more than twice as many correct predictions as incorrect ones in the first two periods and more than *nine* times as many in the Cold War era (the ratio of correct to incorrect predictions is 37 : 18 in the 19<sup>th</sup> century, 65 : 31 in the interwar period, and 29 : 3 in the Cold War). All are significant at the Pr< 0.001 level according to Fisher's sign test, which corresponds to a standard binomial test; the intuition is that the information contained in the signs of the coefficients is like the heads/tails information contained in a coin flip, and by tallying the number of signs that correspond to our expectations, we can assess the overall descriptive, and therefore explanatory, utility of the model. Because the expectation is

These inferences hinge critically on strong instruments, and all of the instruments generated by the models were quite strong, as indicated by the F-statistic for whether coefficients equal zero in a regression of the original variable on the instrument.<sup>65</sup> An examination of the error terms uncovers substantial correlation, a fact that justifies the additional effort, and assumptions, of the 3SLS/FIML approach rather than ordinary OLS. All in all, then, the nested politics model maps quite well to the real world in each of these periods, at least by these metrics.

The last row of Table 3.2 presents the results of the test of the realist reducibilityto-power argument, in the form of a test that the parameters implicated by the argument that is, those associated with the balance of ideology terms, both at the state and the structural level—are jointly equal to zero. To test of whether this parameter restriction significantly reduces the model's explanatory power, I utilize F-tests for the interwar period and  $\chi^2$  tests for the other two periods.<sup>66</sup> The results indicate that without exception the claim cannot be supported. The joint probability that the coefficients equal zero in each case is trivially small. For the sake of completeness (and out of curiosity) I also test to see whether it would be possible to reduce the model to one in which states are *only* concerned about the balance of ideology and not about the balance of power; the answer, reported in the final row, is that the data do not support such a simplification of the model.

### **Rational Expectations?**

Next, it is worth examining the data to see whether they contain any evidence of the sort of coadjustment to within-period innovations that the rational expectations school would lead us to expect.<sup>67</sup> The pure, long-time-horizon rational-expectation argument has become implausible in light of the success of the partial-adjustment model, but it remains to be seen whether states at least engage in within-period adjustment to contemporaneous shocks as well as retrospective adjustment, despite the costs of doing so.

The answer, based on the estimates of the correlations among the error terms in Table 3.3, is "sometimes." In the 19<sup>th</sup> century, evidence for coadjustment to contemporary shocks is fairly strong, especially between contiguous states (Austria-Russia, Austria-Prussia, Prussia-France), but also between the UK and most of the continental Powers. In the interwar period the evidence is considerably less strong, but it must be pointed out in the context of the small sample size that many of the correlations are in fact fairly substantial in magnitude. Stronger evidence of coadjustment can be found among the Germans, the Italians, and the Americans—clearly not evidence of collusion between the United States and the Axis, as the US-Germany and US-Italy correlations are large and negative.

Why are some correlations negative while others are positive? There are theoreti-

that more than 50% of the coefficients' signs will correspond to predictions, rather than that the percentage will differ from 50% in one direction or another, a one-tailed test is appropriate.

<sup>&</sup>lt;sup>65</sup>On the issue of weak instruments see e.g. Cameron and Trivedi (2005, 104-110) and Imbens and Rosenbaum (2005, 112-113 and *passim*). Cameron and Trivedi recommend a threshold of 10 for the F-statistic.

<sup>&</sup>lt;sup>66</sup>Cameron and Trivedi (2005, 278).

<sup>&</sup>lt;sup>67</sup>See, for example, Williams and McGinnis (1988, 978).



Table 3.3: Correlations among error terms, all systems. \*\*\*Pr< 0.001; \*\*Pr< 0.05; \*Pr< 0.10.

cal reasons to expect this to be the case: Based purely on the model, one might expect negative correlations among reactions to innovations when the states' ideal points are on opposite sides of the status quo and positive correlations when they are not. This does not *necessarily* correspond directly to either allied or adversarial status, though adversaries should tend to be on opposite sides of the status quo point more often than not. This would explain the negative correlations just mentioned, but not, for example, the positive correlation between the error terms of the French and German equations in the 19<sup>th</sup> century.

### Visualizing Systemic Incentives

The large-N statistical results tell us that the partial adjustment model provides an accurate description of Great Power behavior and that the structure of the system reacts in proportion to the intensity of the actors' pushing and pulling, as well as to their strength. They also provide the model with the opportunity to make concrete (and possibly incorrect) predictions in the aggregate. What these results do not capture, however, is the answer to a more comprehensive question: Given their worldviews, what incentives do the system provide for the actors at any given point in time?<sup>68</sup>

This question cannot easily be answered by looking at the model coefficients,

<sup>&</sup>lt;sup>68</sup>It is important to emphasize that these are *systemic* rather than purely *structural* incentives. The actors and the structure together comprise the system, and the impact of the structure of the system is mediated by the worldviews of the actors. A change in either could produce changed incentives; to take a simple example, a change in the balance of power (structural) or a change in a given state's emphasis on the balance of power, even in the absence of a change in that balance (actor-level), could each produce changes in a state's incentives to act.



Figure 3.3: A generic vector field, showing levels of activity for two states on X and Y axes, arrows denoting the direction and magnitude of structural incentives for state behavior, and an equilibrium point.

but the model can provide us with a set of predictions—roughly akin to measures of substantive impact in a standard statistical model—that give us a comprehensive illustration of the forces at work in the system. The vector fields it produces capture the sum of the effects of the systemic forces—both unit-level and structural—acting on the states.<sup>69</sup> Take, for example, Figure 3.3, which represents the state of the world in a given year. The X-axis measures the level of activity of one actor, while the Y-axis measures the level of activity of another; in a bipolar system this would be a complete depiction of the actors' systemic incentives, whereas in a system with more Great Powers it would represent a cross-section taken from a higher-dimensional space. The arrows tell us what incentive, if any, the system gives the actors at different levels of activity—to increase their activity, decrease it, or remain the same.

In this example, if both actors were essentially isolationist, exhibiting very low levels of activity, the systemic incentive would be for both of them to increase their levels of activity—State 1 more than State 2, as indicated by the less-than-45-degree angle of the arrow leading up from the lower-left corner. If State 1 is essentially isolationist but State 2 is extremely active, the conditions present in the system would prompt State 1 to increase its activity and State 2 to decrease its activity, as indicated by the downward-sloping arrow at the upper left. If both states were engaging in intermediate-to-high levels of activity, on the other hand, they would be near the equilibrium point, and the system would provide little incentive to change their behavior.

It is important to emphasize that the prediction of the model is *not* that states will always be at the equilibrium point. Because the partial-adjustment perspective suggests that states will always be feeling their way *toward* equilibrium, and because the estimated coefficients tell us how assertively they will do so, the equilibrium

<sup>&</sup>lt;sup>69</sup>Technically, we calculate predicted values assuming different levels of activity for the state at year t, and plot the predicted change in activity in year t + 1 at each level of activity.

point is not an ironclad prediction as much as a point toward which both stated will tend. The overall picture is therefore not intended as a concrete test in the same way as the previous tests were but rather as an illustration of how, as Waltz puts it, structures "shape and shove" but do not conclusively determine actors' behavior.<sup>70</sup> The large-N statistical results in the previous sections served to evaluate the argument that actors responded to structures (and vice-versa). These vector fields cannot help us evaluate that argument with anything like the same precision; they simply serve to illustrate how systemic incentives operate in a way that appeals to intuition far more than the statistical results ever could.<sup>71</sup>

A minute examination of 175 years of interactions among seven Great Powers would take a substantial amount of space, but we can at least examine the predictions that are most relevant to the case studies in Chapter 4. In Figure 3.4, therefore I examine systemic incentives for four of the five actors at two points of interest in the 19<sup>th</sup> century. In the first, 1817, the Treaty of Vienna, in which the Great Powers reached a wide-ranging accord designed to maintain the peace of Europe, was just two years old. Nevertheless, the legitimist consensus that they attempted to impose did not prove to be universally popular, and the next few years would see Congresses at Aix-la-Chapelle, Troppau, Laibach, and Verona as well as the French invasion of Spain.<sup>72</sup> The constitutionalist-legitimist split that would soon divide the Great Powers themselves was growing. In short, despite the peace settlement they all had substantial systemic incentives to continue engaging in fairly active foreign policies.

By 1830, on the other hand, the July Revolution in France had occurred, Belgium was experiencing a constitutionalist revolution, Poland would erupt in revolt late in the year, and a recognition of Greek independence was not far in the future. British incentives to act are the product of a more liberal worldview in the context of a more liberal system—both more inclined to support constitutionalist causes and, at the same time, more satisfied with the new status quo than it would previously have been. Russia under Nicholas I is a different story entirely: the liberalization of the continent galvanized the Tsar to take action to redress the status quo and shore up the solidarity of the conservative Eastern monarchies.

The second case has to do with America and Germany in the interwar period; Figure 3.5 illustrates this dynamic. In the early interwar period, much of the tension over security in Europe had to do with the system of reparations payments that had been devised at Versailles. In 1923, the year of the Ruhr Crisis,<sup>73</sup> the Americans

 $<sup>^{70}</sup>$ Waltz (1986, 343). Waltz attributes the disjuncture between structural incentives and actor behavior to the fact that "unit-level and structural causes interact [and] the shaping and shoving of structures may be successfully resisted."

<sup>&</sup>lt;sup>71</sup>It is also important to emphasize, though it may seem obvious, that the vector fields only capture the effects of systemic forces on behavior. They could do little else, as there are no other variables in the model. Yet as the case studies in Chapter 4 demonstrate, while the systemic mechanism forms the core of the process driving each of the cases, none of them is entirely complete without the impact of some idiosyncratic exogenous variable. The lesson is that the predictions of the vector fields are somewhat suggestive—as any social science prediction with uncontrolled exogeneity (i.e., any social science prediction) should be.

<sup>&</sup>lt;sup>72</sup>In terms of the model, it is worth noting that the ongoing unrest in the smaller states of the continent was in part a residual effect of Great Power activity in a previous period—namely, Napoleon's efforts to inspire nationalist risings in order to weaken existing regimes.
<sup>73</sup>In early 1921 the Reparations Commission issued its first assessment, in the amount of 150 billion

<sup>&</sup>lt;sup>73</sup>In early 1921 the Reparations Commission issued its first assessment, in the amount of 150 billion gold marks. A brief German revolt led to the occupation of three German cities and capitulation by both



Figure 3.4: The European system during the early Vienna period.

had concluded that their reasons for involvement on the continent did not warrant membership in the League of Nations and the Germans, appalled at the magnitude of reparations, had nevertheless not yet adopted an openly revisionist stance. Both faced modest systemic incentives to act.

After 1923, a few trends are noticeable in the incentives presented by the system. The first is in Germany, which witnessed gradually increasing incentives to act on the whole throughout the 1920s—due not to any substantial changes in the structure of the system itself, but rather to changes in how it was viewed within Germany. In short, there was a gradual erosion in the already modest willingness of the Germans to tolerate the provisions of the Versailles settlement, and as those provisions became

sides. By May 1921 a debt of 132 billion gold marks (\$30 billion; Pulzer 1997, 106) was agreed upon, and yearly payments began, but it soon became clear that the combination of Germany's inability to pay and France's insistence upon compensation left no middle ground. Accordingly, on January 11, 1923, French and Belgian troops moved into the Ruhr with the goal of occupying it and using the proceeds as reparations.



Figure 3.5: Systemic incentives in the first half of the interwar period.

more intolerable, the structure of the system itself, while not substantially different, constituted an ever-greater incentive to act throughout the 1920s and 1930s.<sup>74</sup>

At the same time, Germany remained largely powerless to alter the status quo. Its substantial reparations burden meant that even if its economy were the strongest in Europe it would be unable to devote a substantial percentage of its resources to altering the status quo, especially prior to Hitler's abrogation of the Versailles treaty's military restrictions. As Chapter 4 will show, only in the late 1930s did Germany reach the point at which it could alter the structure of the system, and only when it did so did the United States respond.

America's focus on the threat posed by Germany underwent a substantial shift in 1940. 1940 marked the year of the abrupt and unexpected fall of France, the point at

<sup>&</sup>lt;sup>74</sup>See e.g. Mommsen (1996, chs. 6–7). Italy also demonstrates a substantial shift toward revisionism, even earlier than that of Germany: after Mussolini came to power in 1922, Italy became an increasingly illiberal regime with expansionist aspirations, one that increasingly viewed the status quo as unacceptable.



Figure 3.6: The US and the Soviet Union in the early Cold War, the era of détente, the late Brezhnev era, and during *perestroika*.

which the ideological and material balances of the system tilted abruptly and without warning in Germany's favor. This change in the structure of the system provided the incentive for the United States to act to oppose Germany, and indeed, upon closer examination the historical record suggests that the fall of France, rather than the bombing of Pearl Harbor a year and a half later, was in fact the event that precipitated the end of American isolationism.

Finally, the latter years of the Cold War system, with its two superpowers, presents a relatively straightforward illustration of the effects of systemic pressures on Great Power behavior. The transition from 1981, when the abrupt end of détente focused both sides' attention on the arms race and marginally increased the intensity the struggle between them (left), and 1987, when Mikhail Gorbachev's reforms had institutionalized a "new thinking" that cast the world in de-ideological terms and emphasized a more modest defense policy of "reasonable sufficiency" (right), is substantial. It is clear from the relationship between the two graphs that this shift had produced a marked change in Soviet incentives. The graphs also provide a nice illustration of the intuition behind the systemic model: Although Soviet incentives had changed, decreased Soviet activity had not yet had a major impact on the structure of the system in either the arms control arena or in the realm of ideology. Structural change in those areas would not be pronounced until late 1989, when the Soviets permitted the Berlin Wall to be breached. As a result, Washington, which was responding not to changes in Soviet declaratory policy but to tangible changes in outcomes, saw no such changes and therefore remained wary of Moscow's overtures. American systemic incentives reflect this outcome, with the Soviet Union being drawn toward intermediate levels of activity while American incentives remain nearly unchanged since the early 1980s.

## **Diagnostic Checks**

Before concluding, it is worth engaging in some diagnostic checks on the data to ascertain the extent to which some of the assumptions of the model hold. Two in particular merit scrutiny: the relationship between constituents and elites, and the decision to break the period under study down into three periods for analysis.

### **Domestic Constraint**

Recall the discussion of constituents and elites in the previous chapter, in which the constituency placed demands on the leaders, potentially without uttering a word, much as the path of a lightning bolt is determined by tiny differences in resistance among air molecules. This argument implies that the worldviews of leaders and those of their constituencies should be more or less aligned at any given time—more so in very democratic states, to be sure, but even loosely in nondemocratic states. To the extent that that is the case, elites will be constrained in their actions by their constituencies.

Because the data contained information regarding the positions of both elites and their constituencies in each country, it was possible to establish a rough test of the extent to which the results are consistent with the basic probabilistic-voting model posited above, and therefore of the extent to which elites in a given country in a given time period were constrained with regard to a particular issue. The method of gauging this relationship is straightforward: I simply generated a new variable, consisting of the historians' estimates of the constituency's position subtracted from the historians' estimates of the elites' position—the idea being that, if constituency and elite positions do, in fact, line up, this quantity should be equal to zero. I then broke this measure down by time period, country, and issue and graphed the densities, along with the overall (all-country) densities, in Figures 3.7–3.9 for visual inspection.

We can use these diagrams to assess the manner in which states aggregate preferences in two ways. If elites accurately reproduce the worldviews of their citizens on average, the density's center of mass should be near zero. If they do so consistently, the density should not be very spread out. Needle-thin distributions centered on zero would therefore resemble the ideal of consistent accurate representation, whereas wide distributions centered away from zero would deviate from that ideal.

The results suggest that for most countries at most times the model is not glaringly inaccurate. It is reasonable to expect that even highly representative political systems will occasionally produce slight deviations between the views of elites and those of their constituencies, but on average the two mostly coincide, as we can tell by examining the overall densities in each figure.

There are some noteworthy deviations. 19<sup>th</sup> -century elites, especially in authoritarian states, are on the whole less enthusiastic than their constituencies about the prospect of the success of continental liberalism, which is perhaps to be expected given that the 19<sup>th</sup> century was on the whole a period of more or less continual liberalization, and the devolution of political power is inevitably more popular among the recipients than among the donors. The distributions suggest that they were relatively free to depart at least modestly from the preferences of their constituencies on this



Figure 3.7: Difference between elite and constituency positions, by country and issue, 1815-1914. Quantity is elite minus constituency position; dotted vertical line at zero. For power, positive numbers mean that elites are more inclined than constituents toward a dynamic, rather than a static, balance of power; negative numbers mean the converse. For liberal governance, positive numbers mean that elites are more inclined to support the spread of liberal governments throughout Europe than their constituents, while negative numbers indicate that the constituencies are more inclined to do so.

score. It is worth noting that some level of domestic conflict is often associated with marked diversions between elite and constituency opinion on this issue. For example, Russia undergoes such a transition on the liberal question after the revolutions of 1848 and again after the assassination of Alexander II by revolutionaries and the rise of the reactionary Alexander III in 1881, as does France not long after the found-ing of the Second Empire in 1852. These trends explain the particularly noteworthy divisions within these countries on the question of the success of liberalism.

Similarly, there is a slight tendency for elites to be more focused on both the balance of power and of ideology than their constituents. The tendency is less pronounced than students of public opinion might anticipate, but then again, for most of the states in this period the constituency represented a small fraction of the general public.

In the interwar period, the first thing that seems noteworthy is the extent to which elite and constituent worldviews are not just aligned on average but aligned more consistently: the variance of the densities relative to those of the 19<sup>th</sup> century has shrunk considerably. Political elites also tend to be more in line ideologically with their constituencies than they were in the 19<sup>th</sup> century. Finally, constituencies are, across the board, marginally more in favor of arms control and lower arms levels than are contemporaneous elites, a result consistent with the popular origins of the interwar arms control movement. Only in the United States, where elites became world leaders in the arms control movement, was elite and constituencies were squarely in line with political elites, though in Italy and to a lesser extent in Germany



Figure 3.8: Difference between elite and constituency positions, by country and issue, 1918-1940. Quantity is elite minus constituency position; dotted vertical line at zero. For power, positive numbers mean that elites want a weaker Germany than their constituents do; for arms, positive numbers mean that elites want higher overall arms levels than their constituents do; and for liberal governance, positive numbers mean that elites prefer more liberal governance throughout Europe than do their constituents.

itself constituents leaned slightly more toward a stronger Germany than did elites—a reflection of the unpopularity of the Versailles settlement.

The Cold War period represents the apogee of the success of the preferenceaggregation model. On issues of the balance of power and the balance of ideology, constituencies are squarely in line with elites in terms of both ideal points and salience, and the variances of the densities are so narrow that they often appear to be spikes. The only exception is arms control, an issue area in which constituencies are consistently slightly more doveish (and, perhaps explaining the divergence, consistently slightly less interested) than elites.

The overall lessons are fairly straightforward. First, although there are clearly periods in which constituencies and leaders are at odds, at most times in most states the ideal points of the constituency are fairly well aligned with the ideal points of the elites, and the same can be said for their assessments of the salience of the various structural dimensions. Second, when there are systematic differences between the two, they tend to come during times of change (e.g., periods of liberalization in the 19<sup>th</sup> century and arms control in the 20<sup>th</sup>). Finally, the extent to which the model accurately describes reality seems to increase over time, in liberal and autocratic states



Figure 3.9: Difference between elite and constituency positions, by country and issue, 1945-1993. Quantity is elite minus constituency position; dotted vertical line at zero. For power, positive numbers mean that elites are more inclined than their constituents to seek a preponderance rather than a balance of power; for arms, positive numbers mean that elites want higher overall arms levels than constituents do; and for liberal governance, positive numbers mean that elites prefer more liberal governance throughout Europe than do their constituents.

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### Are There More Than Three Systems?

One of the concerns of time-series modeling, aside from the degree of the empirical fit, is the possibility that there will be a structural change in the data—that the relationship between independent and dependent variables will change substantially enough to warrant the estimation of separate regressions. In the context of the present study, although I have taken this issue seriously enough to conclude that there are three systems distinct enough to warrant the estimation of separate statistical models, it is nevertheless possible that those three systems themselves are not causally homogeneous. If that is the case, the period might be better understood as

<sup>&</sup>lt;sup>75</sup>Out of curiosity, as a first cut to see whether the data could speak to the question of whether constituency opinion primarily leads elite opinion or vice-versa, I calculated the simple correlation coefficients for constituency ideal points at time t and elite ideal points at time t + 1, on the one hand, and elite ideal points at time t and constituency ideal points at time t + 1, on the other, by country and period. The differences between the two correlation coefficients were generally trivially small—so small that they could easily be attributed to chance—and the few situations in which they were more substantial displayed no particular pattern.

consisting of four or more systems, divided by events less obvious than general wars, and reestimation would be in order.

Such caution may seem unwarranted; after all, international relations scholars typically utilize data from the end of the Napoleonic Wars to the present without concern for structural changes in the data. Nevertheless, the possibility of such a change is far from fanciful, based on a reading of the historical literature. For example, Craig and George (1983, 28) argue that

[t]hree generations of statesmen struggled with the problem of establishing a viable equilibrium of forces in Europe [in the 19<sup>th</sup> century], and their efforts found expression in three quite different systems of balance of power, each of which reflected the characteristic tendencies of its time.

If true, and if the differences among the three systems are pronounced enough to imply different relationships between the balance of power and the activities of states, they should ideally be examined separately. This is a concern that should be addressed in historical models, both because the assumption of a constant causal process across a long timespan can be a heroic one and because changes in coefficients could very well have interesting substantive interpretations.

I have therefore run MOSUM (moving sum of residuals) tests to evaluate the stability of the OLS series. The intuition behind such a test is straightforward: an *empirical fluctuation process* consisting of a moving sum of model residuals is constructed and charted over the duration of the time series. A substantial increase or decrease in the value of the process being charted suggests that a structural change may have occurred, and confidence intervals built around the process provide a straightforward visual cue to determine whether the change is larger than one that would be expected given random variation.<sup>76</sup>

Such a test is presented in Figure 3.10. Each graph charts the empirical fluctuation process for one variable in the model—either a structural dimension, such as the distribution of capabilities or ideology, or an actor's level of activity. The dotted lines at top and bottom represent the 95% confidence intervals within which the solid line should, if all is well, be contained. Encouragingly, not a single one of the 21 empirical fluctuation processes examined wanders outside of the confidence intervals, and very few come particularly close. Therefore, the available evidence suggests quite strongly that, within each of these systems, the assumption of a single, ongoing regime is justified.

### Conclusion

What I hope to have shown here, in a more compelling manner than previous systemic theories have been able to do, is that a model of the international system in which the structure of the international system has an impact on the security policies of states *and* those policies simultaneously shape the structure of the system fits

<sup>&</sup>lt;sup>76</sup>See Chu, Hornik, and Kuan 1995 for details of this procedure.



Figure 3.10: Testing for regime change: Moving sum of residuals (MOSUM) tests of structural stability, 1815-1914 (top), 1918-1940 (middle), 1945-1990 (bottom).

the historical record from the past two centuries. Moreover, the results demonstrate that, in the context of such a model, the balance of power cannot be given pride of place: the balance of ideology both shapes and is shaped by the security policies of the Great Powers. The predictions of the partial-adjustment model are borne out, on the whole, suggesting that states engage in retroactive adjustment to counter changes to the status quo once they have occurred. Moreover, the predictions of the rationalexpectations school are borne out as well, though perhaps less consistently, suggesting that states engage in prospective adjustment to counteract unexpected within-period innovations. Finally, the model's qualitative predictions of the incentives produced by the system, though not determinate, provide additional indications of the model's plausibility.

The next chapter will take a closer look at a series of historical cases in an attempt to do two things. First, it will offer a better sense of the workings of the causal mechanisms posited by the theory: are the causal processes that comprise the theory in evidence in the cases? To what extent are they augmented, or nullified, by other processes? Second, it will demonstrate how the bare-bones model here can be seen to operate in conjunction with other, often more idiosyncratic or ephemeral, factors that nevertheless play a substantial role in a given case.