

# ARCHITECTS OF POLITICAL CHANGE

Constitutional Quandaries  
and Social Choice Theory

NORMAN SCHOFIELD

CAMBRIDGE

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## ARCHITECTS OF POLITICAL CHANGE

This work offers a set of extended interpretations of Madison's argument in Federalist X of 1787, using ideas from social choice theory and from the work of Douglass North, Mancur Olson, and William Riker. Its focus is not on social choice theory itself, but on the use of this theory as a heuristic device to better understand democratic institutions. The treatment adapts a formal model of elections to consider rapid constitutional change at periods when societies face social quandaries. The topics explored in the book include Britain's reorganization of its fiscal system in the eighteenth century to prosecute its wars with France; the Colonies' decision to declare independence in 1776; Madison's argument about the "probability of fit choice" during the Ratification period of 1787–8; the argument between Hamilton and Jefferson in 1798–1800 over the long-run organization of the U.S. economy; the Dred Scott decision of 1857 and the election of Lincoln in 1860; Lyndon Johnson and the "critical realignment" of 1964; and Keynes's rejection of the equilibrium thesis in 1937 and the creation of the Bretton Woods institutions after 1944.

Norman Schofield is the William Taussig Professor of Political Economy at Washington University in St. Louis. He has served as Fulbright Distinguished Professor of American Studies at Humboldt University Berlin in 2003–4, a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford in 1988–9, and Sherman Fairchild Distinguished Scholar at the California Institute of Technology in 1983–4. Professor Schofield is the author of *Mathematical Methods in Economics and Social Choice* (2003), *Multiparty Government* (coauthored with Michael Laver, 1990), and *Social Choice and Democracy* (1985). He received the William Riker Prize in 2002 for contributions to political theory and is co-receipient with Gary Miller of the Jack L. Walker Prize for the best article on political organizations and parties in the *American Political Science Review* for 2002–4.



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NORMAN SCHOFIELD

Washington University in Saint Louis



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## Preface

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Four decades ago, William H. Riker published *Federalism: Origin, Operation, Maintenance* (1964). Riker's motivation in writing this book came from a question that he had raised in his earlier book, *Democracy in the United States* (1953) about the origins of Federalism in the United States. His argument was that only an outside threat could provide the motivation to politicians to give up power by joining the Federal apparatus. His later book, *The Theory of Political Coalitions* (1962), also attempted to answer the question why plurality rule in the U.S. electoral system seemed to be the reason for both minimal winning coalitions and the two-party system. A further book, *Positive Political Theory* (with Peter Ordeshook, 1973), attempted to develop the theory, available at that time, on two-party elections. The convergence result presented in that volume was later shown to depend on unrealistic assumptions about the dimension of the space of political decisions. Later, using the so-called "chaos theorems," Riker returned to the historical questions that had earlier intrigued him and suggested that manipulability and contingency were features of democratic systems (Riker, 1982, 1986, 1996).

Riker's work provides the motivation for this book and for a companion volume (Schofield and Sened, 2006). The formal theory of elections and coalitions, together with empirical analyses of elections in Britain, the United States, Israel, the Netherlands, and Italy, makes up that coauthored volume. This present volume addresses many of the historical questions raised by Riker, using as a conceptual basis the formal electoral model presented in the companion book. This model is only briefly described in the Introduction, and somewhat more extensively in Chapter 8. However, the focus here is not on "social choice theory" itself, but rather on the use of this theory as a heuristic device to better understand democratic institutions.

## *Preface*

The essays included in this book were written over a number of years. Obviously, I owe a great debt to William Riker. I considered it a great honor to be the recipient of the Riker prize from Rochester University, in acknowledgment perhaps of some of the earlier versions of this work. Douglass North pressed me to apply the formal reasoning to more general topics than elections. I hope he finds the result of interest.

I received very helpful comments on the versions of these essays presented at the Hoover Institution, Harvard, Yale, MIT, and ICER, Turin. The notions of quandary, of the Atlantic Constitution, and of a “factor coalition” came about from discussion with Andy Rutten. The idea of “dynamic stability” developed out of long conversations with Gary Miller. Chapter 6 is adapted from work (Miller and Schofield, 2003) coauthored with Gary. Chapter 5 is partly based on work with Kim Dixon, and material used in that chapter was collected by Alexander Fak. Imke Kohler kindly made available her research on Truman and McCloy, and this I found helpful in the discussion in Chapter 7, on the founding of the World Bank and of the Marshall plan. I am indebted to Alexander, Andy, Gary, Imke, and Kim, and to my colleagues at Washington University in St. Louis, particularly Andrew Martin, John Nachbar, Douglass North, John Nye, Robert Parks, and Andrew Rehfeld. Iain McLean, who has written extensively on Condorcet and on applying “rational choice theory” to British politics, kindly listened to earlier versions of aspects of the argument. I thank James Alt, Keith Dowding, Robert Goodin, Manfred Holler, Margaret Levi, Carole Pateman, Maurice Salles, and Albert Weale, who were editors associated with earlier versions of these essays. The original versions of the chapters were typed by Alexandra Shankster, and many of the diagrams were drawn by her and by Diana Ivanov. Cherie Moore, Robert Holahan, Ekaterina Rashkova, and Tsvetan Tsvetkov provided further assistance.

I appreciate the support of the National Science Foundation (under Grants SBR-98-18582 in 1999 and SES-0241732 in 2003) and of Washington University. The Weidenbaum Center at Washington University provided support for the completion of the manuscript. A year spent at Humboldt University, Berlin, under the auspices of the Fulbright Foundation, as distinguished professor of American Studies, gave me the opportunity to develop the formal model that provides the theoretical foundation of the current volume. Finally, Scott Parris, chief editor in economics at Cambridge University Press, exercised great patience during the period of more than a decade that it has taken to complete this work.

—Norman Schofield, December 27, 2005, Saint Louis, Missouri



# I

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## *Constitutional Quandaries and Social Choice*

### I.1 INTRODUCTION\*

[I]t may be concluded that a pure democracy, by which I mean a society, consisting of a small number of citizens, who assemble and administer the government in person, can admit of no cure for the mischiefs of faction. A common passion or interest will . . . be felt by a majority of the whole . . . and there is nothing to check the inducements to sacrifice the weaker party. . . . Hence it is that such democracies have ever been spectacles of turbulence and contention; have ever been found incompatible with personal security, or the rights of property; and have in general been as short in their lives, as they have been violent in their deaths.

A republic, by which I mean a government in which the scheme of representation takes place, opens a different prospect.

The two great points of difference between a democracy and republic, are first, the delegation of the government, in the latter, to a small number of citizens elected by the rest; secondly, the greater number of citizens and the greater sphere of country, over which the latter may be extended.

It may well happen that the public voice pronounced by the representatives of the people, will be more consonant to the public good, than if pronounced by the people themselves . . .

If the proportion of fit characters be not less in the large than in the small republic, the former will present a greater option, and consequently a greater probability of a fit choice.

As each representative will be chosen by a greater number of citizens in the large than in the small republic, . . . the suffrages of the people . . . will be more likely to centre on men who possess the most attractive merit. . . .

The other point of difference is, the greater number of citizens and extent of territory which may be brought within the compass of republican, than of democratic government; and it is this . . . which renders factious combinations less to be dreaded in the former, than in the latter. . . . Extend the sphere, and you

\* This chapter is partly based on a talk presented at the Conference on Constitutional and Scientific Quandaries, at the International Center for Economic Research, Turin, June, 2005.

## *Architects of Political Change*

take in a greater variety of parties and interests; you make it less probable that a majority of the whole will have a common motive to invade the rights of other citizens . . .

Hence it clearly appears, that the same advantage, which a republic has over a democracy . . . is enjoyed by a large over a small republic – is enjoyed by the union over the states composing it.

—James Madison, *Federalist X*, 1787

This book may be thought of as an extended interpretation of Madison's argument, using ideas from the work of Douglass North, William Riker, and Mancur Olson, and aimed at developing "social choice" approaches to the evolution of society. As I suggest at the end of the book, I see this research program as continuing the work of Madison's contemporaries, Condorcet and Laplace.

North's early work with Thomas (North and Thomas, 1970, 1973, 1977) attempted an economic explanation of the transition from hunter/gatherer societies to agriculture. Later, he proposed a "neo-classical theory of the state," wherein contracts with "Leviathan" set up a system of property rights and taxes (North, 1981). His later work has focused on institutions and how they change as a result of incentives, knowledge, and beliefs (North, 1990, 1994, 2005). One of his most persuasive pieces is his work with Weingast (North and Weingast, 1989) on Britain's Glorious Revolution in 1688 and how this transformed Britain's ability to manage debt, fight wars (particularly with France), and develop an empire.

Riker's earliest work was on American Federalism, particularly the logic underlying the need for Union in 1787 (Riker, 1953, 1964) and the stability of parties as coalitions (Riker, 1962). After working for a number of years on rational choice theory (Riker and Ordeshook, 1973), Riker returned to American political history, to interpret key events in terms of "heresthetic" (1982, 1984, 1986, 1996). Riker coined the word *heresthetic* from the greek *αἰρετικός*, meaning "able to choose." His book, *Liberalism against Populism* (1982), argued that social choice theory implied that populism, in the sense of existence of a "general will" was vacuous. At best, all democracy could hope for was the liberal capacity to remove autocrats.

Much of Olson's work attempted to grapple with understanding how some societies are successful and others much less so. In his early book, Olson (1965) used the idea of the prisoner's dilemma to suggest that cooperation may fail as individuals pursue their selfish ends (through strikes, revolutions, etc.) and indirectly constrain economic growth. Later, Olson

(1982a, b) used this argument to provide a “declinist” explanation of why stable democracies such as Britain and the United States appeared less vital (in the 1980s) than the newer democracies of the post–World War II era (such as France, Germany, and Japan).

In this book I attempt to construct the beginnings of a theory of democratic choice that I believe can be used as a heuristic device to tie together these differing historical accounts. The basic underlying framework is adapted from social choice theory, as I understand it, on which I graft a “stochastic” model of elections. This model is an attempt to extend the Condorcetian theme of electoral judgment. I shall argue that its logic was the formal principle underlying Madison’s justification for the Republican scheme of representation that he made in *Federalist* X. While this logic does not imply a general will in the sense of Rousseau, it does suggest that Riker was overly pessimistic about the nature of democracy. On the other hand, the social choice framework suggests that democracy, indeed any polity, must face difficult choices over what I call chaos and autocracy. These difficult choices are the *constitutional quandaries* of the subtitle of this book. The historical choices that I discuss often involve a leader or theorist—an *architect of change*, either in the realm of politics or economics—who interprets or frames the quandary troubling the society in a way that leads to its resolution.

## 1.2 BALANCING RISK AND CHAOS

Figure 1.1 is intended as a schematic representation of the formal results of social choice theory. This figure is replicated in Chapter 2, where a more detailed discussion is provided of its interpretation. This figure is intended as a theoretical construct whose purpose is to suggest the relationship between the many differing results of the theory. The vertical axis denotes the “axis of chaos.” The theorems of social choice, from the earliest result by Arrow (1951) to the later work on spatial voting theory (McKelvey and Schofield, 1986, 1987) imply that as factionalism increases, then utter disorder can ensue. The term *chaos* was introduced to describe the possible degree of disorder by analogy to *mathematical chaos*, which was used to characterize a deterministic dynamical system,  $f$ , with the feature that for almost any pair of outcomes  $x, y$  in the state space,  $X$ , there exists a trajectory (see Li and Yorke, 1975)

$$x \rightarrow f(x) \rightarrow f^2(x) \rightarrow \dots f^t(x) = y. \quad (1.1)$$

# Architects of Political Change

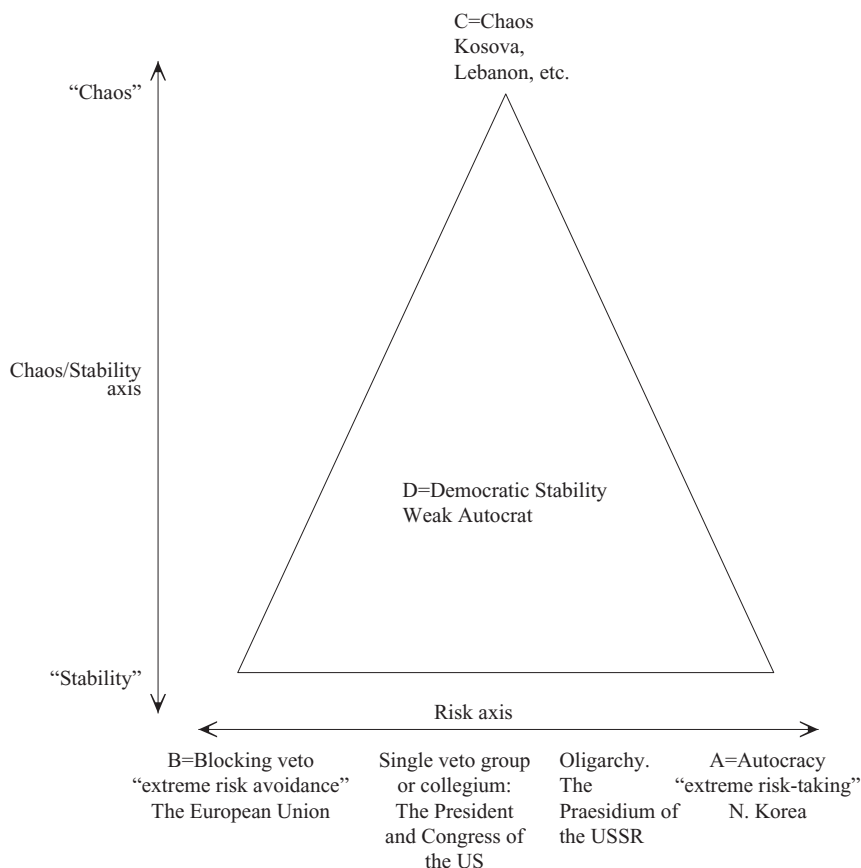


Figure 1.1. Chaos or autocracy in a polity.

For a voting rule, with specified voter preferences and an initial point  $x$ , let  $f(x)$  be the set of alternatives that beat  $x$ . More generally, we can think of the set,  $f(x)$ , as the set of alternatives that can come about from  $x$ , as determined by the social rule. The idea of *social chaos* is that there are conditions under which, starting from almost any  $x$ , it is possible to reach almost *any* possible outcome  $y = f^t(x)$  by reiterating the social rule. When the set  $Y$  that can be reached is large, in a formal sense, then we can call  $Y$  the *chaotic domain*,  $Chaos(f)$ . In contrast, we can identify the *core* or *social equilibrium*,  $Core(f)$ , as a singularity of  $f$ , where  $y$  is in  $Core(f)$  if and only if  $f(y)$  is empty. An element  $y$  of  $Core(f)$  may be an attractor of  $f$ , that is, a single outcome with  $y = f^t(x)$ , which results from any  $x$ , after some number of iterations of the rule.

The *social chaos theorem* sets out the conditions for existence or otherwise of the social equilibrium and for the situation where the chaotic domain becomes almost the whole of  $X$ . For example, for any voting procedure,  $f$ , without a dictator, oligarchy, or collegium<sup>1</sup> able to control, or at least restrict, social choice, then, as the dimension of  $X$  increases, so does the extent of voting chaos.<sup>2</sup> For a general social rule,  $f$ , Schofield (1985a) formally defines  $Chaos(f)$  in terms of local cycles of the rule and then shows that the union of  $Chaos(f)$  and  $Core(f)$  is non-empty. Thus, if the rule has the property that  $Chaos(f)$  is empty, then  $Core(f)$  must be non-empty. The theoretical problem for democratic theory is that if  $Chaos(f)$  for the social rule,  $f$ , is non-empty, then there may be no social equilibrium. However, as discussed at length below, it may be the case that democratic power resides in veto groups. Since a veto group is a collegium in some limited domain of policy (namely a subset of  $X$ ), then  $Chaos(f)$  will be empty, and the social chaos theorem will not apply.

Note however that chaos, as I interpret it, is not just a property of voting procedures. For a society where the social rule,  $f$ , is war rather than voting, then I suggest that the chaotic domain,  $Chaos(f)$ , is likely to be a large subset of  $X$ . For less violent methods, the chaotic domain will typically depend on the heterogeneity of preferences in the society. These results do not imply that democracies are necessarily chaotic, but they do suggest that they can be.<sup>3</sup> Throughout this book I shall use the term *chaos* somewhat loosely, to refer to a social situation where there is

<sup>1</sup> Chapter 2 gives more detail on this assertion. Roughly speaking, a voting rule is characterized by a family of winning coalitions,  $D$ , say. A *dictator* is a single agent who belongs to every winning coalition and is also winning. An *oligarchy* is a group that belongs to every winning coalition and is itself winning, while a *collegium* is a group of voters that belongs to every winning coalition in  $D$ , but need not be winning.

<sup>2</sup> Chapter 8 discusses the similar results on chaos in different domains. For social choice, the chaos theorem is presented for a voting rule  $D$ , with specified voter preferences. If  $D$  is collegial, in the sense that there is a collegium, then the core,  $Core(f)$ , of the social rule,  $f$ , will generally exist. If  $D$  is non-collegial, then there is an integer,  $w(D)$ , called the "chaos dimension," which characterizes  $D$  in the following sense: If the dimension of the space,  $X$ , exceeds  $w(D)$ , then the chaotic domain,  $Chaos(f)$ , of the social rule,  $f$ , will be almost the whole of  $X$ . What I call the *social chaos theorem* is the result of a long sequence of results by Plott (1967), Kramer (1973), McKelvey (1976, 1979), Schofield (1978, 1980, 1983), McKelvey and Schofield (1986, 1987), Banks (1995), Saari (1996), and Austen-Smith and Banks (1998, 1999).

<sup>3</sup> There has been much debate about the applicability of the social chaos result to democratic theory. See, for example, Riker (1980, 1982, 1984, 1986), Hammond and Miller (1987), and the essays in Ordeshook and Shepsle (1982).

reason to believe that it is impossible to determine, even in general terms, where the social trajectory will go.

When war, or intense and unrestrained conflict, dominates, then we can expect chaos, as in Kosova, in Lebanon during the civil war, and in Iraq at the present time. For a pessimist like Hobbes, it was obvious that any society could fall into chaos, unless mitigating institutional devices were constructed. The quote from Madison's *Federalist X* suggests that Madison certainly viewed direct democracy as subject to chaos. Indeed, in his other writings, he used the phrase "the mutability of the law" in commenting on the possible choices of the legislature. I take his comments to mean that he considered that legislative bodies such as the House and Senate were subject to a degree of disorder—possibly not the complete disorder of chaos. It should be noted that the chaos theorem refers to situations where individuals with specific and heterogeneous preferences come together in either war or assembly and are in conflict over an *outcome*. Thus a legislative assembly can be understood as a direct democracy, and consequently can exhibit chaos, as suggested by the social choice results. Madison was very clear that representative democracy involves the choice of a *person*, and he obviously believed that the voters in the Republic could make a sound choice for the Chief Magistrate if their judgments were not contaminated by preferences. One purpose of this book is to explore the nature of social choice when it depends on judgment rather than simply individual preferences.

The rationalizability of social choice may hold when an electorate makes a specific and limited choice, particularly in a binary situation of yes or no. For example, the negative referenda votes in May and early June 2005 in France and the Netherlands over the European Union (EU) Constitution, while unexpected, cannot be seen as truly chaotic, because they were one-off events. However, the frantic responses by the political leaders of the EU may have elements of considerable disorder. At the same time, there are many institutional devices within the EU that are designed to control disorder.

The effect of these institutional "equilibrium" devices are well understood from the point of view of social choice theory. They all force "rationality" by concentrating power in various ways. This is shown in Figure 1.1 by the power characteristics of the decision rule,  $f$ , along the *risk axis*. The work on social choice by Arrow (1951) considered a very strong rationality axiom. Using this he showed that if this rationality property is to be satisfied then the most extreme form of power concentration, namely "dictatorship," is a *necessary* condition in the case that individual

preferences are unconstrained. Less extreme forms of power concentration include existence of an “oligarchy,” or “collegium,” or multiple veto groups. Because a “dictator” can make any choice “he” deems fit, and such a degree of power concentration almost never occurs in a polity, I shall use the term *autocrat* for one who controls the levers of power of the polity and has at least the ability to declare war without being constrained by some form of political veto. Clearly, Saddam Hussein was not a dictator in the formal sense, but he certainly was an autocrat. Similarly, I use the term *oligarchy* for a group who, if they agree, have “autocratic” powers. A *collegium* is a group without full autocratic powers, but who must all agree before the exercise of such power to pursue war or other endeavors. A *veto group* is one with collegial power within a specific restricted domain of policy. Obviously there can be many veto groups in any complex society.

Figure 1.1 presents my hypothesis that autocrats are likely to be extreme risk takers. To some degree, this is an empirical assertion. One only need make a list: Genghis Khan, Attila, Philip II of Spain, Napoleon, Hitler, Stalin. Kennedy’s book, *The Rise and Fall of the Great Powers* (Kennedy, 1987) argued that great nations tend to over-exert themselves in the military realm, and through lack of fiscal caution, bring about their own demise. If we translate this argument by regarding the lack of fiscal caution as an element of risk taking more generally, then Kennedy’s logic certainly seems valid for Philip II and Napoleon, and possibly for the leaders of the USSR during the cold war. Kennedy also argued that it applied to the United States in the post-World War situation. Table 2.1 in the next chapter gives the relevant data on military spending for the United States and USSR up until 1991 and suggests that there was little indication of this risk-preferring military incaution by the United States until that date. Whether the same inference is valid today is another question entirely.

On the risk axis, an autocrat is likely to be much more risk taking than an oligarchy. I also suggest that an oligarchy will tend to be more risk taking than a collegium. It is difficult to precisely differentiate between an oligarchy and a collegium. An example of an oligarchy is the Praesidium of the Soviet Union. All members of the Praesidium must agree, in principle, for a choice to be made, but if they do, then no decision-making body can override them. A possible example of a collegium is the U.S. President together with his cabinet, in a situation where the majority parties of the House and Senate are in line with the president, and agree with his policy initiatives. The more general situation, of course, is where the President may veto Congress, and Congress may, in turn, counter his veto, with a

supermajority. Thus the U.S. executive and Congress, regarded as a unit, can be interpreted as having collegial power. Because the Congressional counter-veto requires a supermajority, only very extreme situations can lead to chaos as a result of presidential/congressional interaction. Note, however, that the President and Congress together do not comprise an oligarchy, since there are obvious policy domains in which Congress and the President may concur but are blocked by state legislatures.

Because Congress may be factionalized, it can, as Madison expected, exhibit what he called *mutability*—a degree of disorder or incoherence in the laws that are passed. My understanding of the U.S. Constitution is that it has a precise design to allow the presidential veto to overcome congressional mutability. Of course, if there is a well-disciplined majority party in Congress, then it can act as a collegium, thus ensuring stability of some kind. However, it is certainly possible for Congress to become factionalized, leading to the collapse of the collegium. One instance of this was the presidential election of 1844 and its aftermath, as discussed in Chapter 5. Because of the actions of Southern Democrats in blocking the candidacy of the New York Democratic, Martin Van Buren, the Northern and Southern wings of the Democratic party split, and Northern Democrats voted with Northern Whigs to suspend the gag rule, forbidding discussion of the issue of slavery in the House. This factionalization led eventually to a realignment of the party structure in the election of 1860.

Madison, of course, was concerned that the President would gain autocratic power, and to avoid this, the Congressional counter-veto was devised. However, even with the counter-veto, the President does have some autocratic power, and I shall use the term *weak autocrat* to characterize his power. It is evident that there is a tendency for U.S. presidents to display the degree of risk preference that characterizes autocrats. I judge that Congress will generally be risk-averse, which is why, I believe, power to declare war resides in Congress. Even when Congress and the President are aligned, then one would still expect the Presidential risk preference to be muted by Congressional risk avoidance.

On the other hand, Congressional risk avoidance has the effect of delaying the resolution of fundamental constitutional quandaries. Typically, a *quandary* can only be faced if there is a risk-taking leader capable of forcing resolution. Without such a leader, the result can be the opposite of chaos, namely “gridlock.” An illustration of this is given in Chapter 6, in the discussion of the passage of Civil Rights legislation in 1957, while Johnson was leader of the Senate (Caro, 2002). Decisions in the Senate



could be blocked by the filibuster, and this could only be overcome by “cloture.” This rule required “support from two-thirds of those present and voting to impose cloture. This meant that a minority coalition of one-third plus one of those present and voting could prevent a vote” (Rohde and Shepsle, 2005). First, as leader of the Senate, and later as president in 1964, Johnson was a risk taker able to persuade the collegium (of one-third plus one) of Southern Democrats to lift its block.

Rohde and Shepsle (2005) go on to observe that “as a consequence of a huge upsurge in filibusters in the decade following the civil rights revolution, Rule 22 was amended in 1975, changing the requirement to an absolute standard—sixty votes—to close debate [in the Senate].” Obviously a group of forty-one senators has blocking power, and the change in the rule has reduced the collegial veto power of such a minority.

As I discuss in Chapter 4, and as indicated by the aforementioned quotation, Madison developed an argument in *Federalist X* that derived from Condorcet. This led him to expect that the election of the president could be assumed to be characterized by a high “probability of a fit choice.” In constrained situations where we may assume that judgments predominate and voters evaluate the options in a clear-sighted fashion, then their choice of Chief Magistrate may indeed be well formed in this way. For this reason I locate the weak autocrat in Figure 1.1 at a position where the risk taking of the autocrat is balanced by the risk avoidance of Congress, as well as by judgment of the electorate. It would be natural to assume that electoral judgment will generally be risk avoiding. However, there are situations where a society feels threatened in some fashion and may exhibit a degree of risk preference. It seems to me that the current situation with regard to the United States and Iraq is unusual, precisely because the electoral judgment has seemed to be much more risk preferring than is common. As the true risks of the current situation become apparent, this risk posture may change.

It is important for my interpretation of electoral judgment that when the “preferences” of the electorate are muted by judgments, then their choice of the Chief Magistrate need not be subject to the chaos results. Whether this is an entirely valid argument is a somewhat delicate matter. Madison hoped that, because the election of the Chief Magistrate involved the selection of a person, rather than an option (as in the passage of a law), judgment rather than preference or interest would predominate. To argue this formally requires analysis of an electoral model where judgment and preference are both incorporated. In this book, I present the tentative outline of such a model. It is of course entirely possible that beliefs or

judgments in the electorate can be transformed in a chaotic fashion. Many of the illustrations of belief transformation presented in this book suggest that while the transformations are highly contingent, they are associated with changes in what I call a *core belief*. A *core*, in social choice theory, is an unbeaten alternative. By analogy, a *core belief* is a belief that has general acceptance in the society.

As Figure 1.1 indicates, at the opposite end of the risk spectrum from autocracy is the situation of extreme risk-avoiding blocking groups. Veto groups are like collegia but with power in a limited domain. As indicated earlier, social choice theory implies that veto groups induce stability, so the effect is the opposite of chaos. A good illustration is provided by the veto power that French farmers have over changes in the EU Common Agricultural Policy (CAP). Obviously French farmers, together with their agrarian allies in Germany and the new members of the EU, such as Poland, have a great deal to lose if the CAP is reorganized. CAP is only one instance of a variety of protectionist, risk-averse mechanisms that several veto groups have been allowed to deploy in the expanding European polity. As Table 2.3 in Chapter 2 indicates, the consequence seems to be that the core polities of France, Germany, and Italy in Europe have stagnating economies. As of August 2005, the estimates of growth by the Organisation for Economic Co-operation and Development were less than 2 percent (1.8 percent in France, 1.1 percent in Germany, and less than zero in Italy) with unemployment roughly 10 percent (about 8 percent in Italy, 10 percent in France and 11.6 percent in Germany). With risk aversion comes high saving, low imports, high trade surplus, and an appreciating euro. This will be increasingly exacerbated as the population structure ages. These facts compare with growth and unemployment of 3.6 percent and 5.0 percent respectively in the United States and 1.7 percent and 4.8 percent, respectively in Britain.

The “non” in France and “nee” in the Netherlands in May and June 2005 may have been induced by voter irritation at the apparent incompetence of the EU institutions, and it is reasonable to infer that these referenda were based on electoral judgment. The problem is that, outside Britain, almost every group, except possibly teenagers and students, has a veto over changes in crucial aspects of the social contract, particularly over unemployment and retirement benefits. Without doubt, it is much more comfortable to live in Europe rather than in the United States. The degree of risk avoidance could be reduced, but only by institutional mechanisms that are more risk preferring. The political institutions of the EU (the Commission, Council of Ministers, European Parliament, the

rotating President of the EU) all appear to be risk averse. The negative referenda have induced some degree of disorder into the Council of Ministers, because the policy arena is now much more like a zero-sum game than before, with ministers arguing over “rebates,” and agricultural subsidies. Although the CAP budget has fallen over the last few years, from 70 percent of the EU budget to 40 percent, its effect is to distort agricultural trade, harming farmers in less-developed countries. It is unclear at present whether or how this EU quandary will be resolved. What is interesting is that the Labour Party in Britain, though recently chosen by a proportion of only 35 percent of the British electorate (much reduced from its support in 2001) still controls 55 percent of parliamentary seats. Unlike a party leader in the same situation in a polity based on proportional representation, Blair, as leader of the party, has the power to engage in a fairly risky strategy against the other party leaders in the EU polities, directed at transforming the CAP. This is consistent with the view that leaders of polities based on proportional representation tend to be risk averse, while leaders chosen through plurality electoral methods are more likely to be risk seeking.

Social choice theory suggests that the EU quandary could be resolved by the selection of a weak autocrat, such as a popularly elected EU president. However, to satisfy Madison’s fears of autocracy, it would be necessary for the electoral choice to be based on the judgments of voters rather than their preferences. It is difficult to see how a Europe-wide election could have an information base that would be sufficient to support such a social choice based on judgment.

With this preamble in mind, I shall attempt to formulate a Madisonian model of election of the Chief Magistrate, President, or political leader, that is in principle applicable to any democratic polity. The model will involve both judgment and preference. Variations of the basic model can then be interpreted in terms of a pure Condorcetian model of judgment, or belief aggregation, as well as a pure, potentially chaotic model of preference aggregation.

### 1.3 PREFERENCES AND JUDGMENTS

For the formal electoral model I shall assume that individuals have preferences that can be represented as functions on some “policy” space  $X$ . This space characterizes both voter interests and possible eventualities. In many of the examples, I argue that  $X$  conceptually derives from the societal deployment of the three factors of land, labor, and capital. Because

the factors are bounded at any time, we may more conveniently regard  $X$  as two dimensional. In empirical applications, for example, surveys nearly always indicate that voters conceive of a conflict between the requirements of capital and labor. What I term the *labor* axis is often derived from beliefs about civil rights or religion. A third non-factor dimension may involve attitudes toward war. In some cases the social attitudes with regard to war are attributable to the desire for territorial expansion. Obviously this notion of factor dimensions is a heuristic device, but it does allow me to represent fundamental constitutional problems in a diagrammatical form.

The interests or beliefs of the population or “electorate,”  $N$  (of size  $n$ ), are described by a set  $\{x_i\}$  of “ideal points,” one for each “voter,”  $i = 1, \dots, n$ . An individual’s ideal point in the space,  $X$ , is used to describe or represent that voter’s interests. In electoral models the ideal point can be obtained from a survey. Whether we view  $x_i$  as representing preferences or beliefs is immaterial.

The set of options,  $S$ , of size  $s$ , is a set  $\{z_j\}$ , each one being a point in  $X$ .

In the situation of an election, each element of  $S$  is a declaration of intended or proposed policy. There is one for each candidate,  $j$ .

While it is usual to conceive of each  $z_j$  as simply a point, we can easily allow  $z_j$  to involve various possibilities associated with differing probabilities of occurrence.<sup>4</sup>

In the simplest model, the “latent utility,”  $u_{ij}$  of voter  $i$  for candidate  $j$  has the form

$$u_{ij}(x_i, z_j) = \lambda_{ij}(x_i) - A_{ij}(x_i, z_j) + \theta_j^T \eta_i. \quad (1.2)$$

Here  $\theta_j^T \eta_i$  models the effect of the sociodemographic characteristics  $\eta_i$  of voter  $i$  in making a political choice. That is,  $\theta_j$  is a  $k$ -vector specifying how the various sociodemographic variables appear to influence the choice for option  $j$ . Thus  $\theta_j^T \eta_i$  is simply the influence of  $i$ ’s sociodemographic characteristics on the propensity to choose  $j$ .

The term  $A_{ij}(x_i, z_j)$  is a way of representing the “preference disagreement” between the interests of voter  $i$  and the  $j$ th option. In particular  $A_{ij}(x_i, z_j)$  may be some function of the distance between  $x_i$ , the preferred

<sup>4</sup> In principle we can construct a more general model where beliefs are probabilities of outcomes, so the possible states are lotteries. This provides no technical problem, since we can put an appropriate topology on this extended state space. The topology I have in mind is a fine topology taking into account differentiability. See Schofield (1996, 1999a,b) and Schofield and Sened (2006).

position (or ideal point) of voter  $i$ , and  $z_j$ , the declared policy of candidate  $j$ , according to some appropriate metric. In the standard electoral model, where  $X$  is a policy space, it is assumed that  $A_{ij}(x_i, z_j) = \beta \|x_i - z_j\|^2$  is the Euclidean quadratic loss (with  $\beta > 0$ ) associated with the difference between the two positions. We can, however, conceive of  $A_{ij}(x_i, z_j)$  much more generally. In the general case  $z_j$  will involve a lottery across different possibilities, and different individuals could evaluate these various possibilities in heterogeneous ways.

The model is stochastic because of the implicit assumption that

$$\lambda_{ij}(x_i) = \lambda_j(x_i) + \varepsilon_j \text{ for } j = 1, \dots, s. \quad (1.3)$$

Here  $\{\varepsilon_j\}$  is a set of possibly correlated disturbances and  $\lambda_j(x_i)$  is the perception by a voter,  $i$ , with beliefs or interests,  $x_i$ , of the “valence” of the option presented by the candidate  $j$ . (See e.g., Ansolabahere and Snyder, 2000; Groseclose, 2001). This valence is a way of modelling the non-policy *judgment* by voter  $i$  of the quality of candidate  $j$ .

In the general model, the probability,  $\text{Pr}$ , that voter  $i$  chooses option  $j$  is

$$\rho_{ij} = \text{Pr}[u_{ij}(x_i, z_j) > u_{ij}(x_i, z_k) \text{ for all } k \neq j]. \quad (1.4)$$

Previous versions of this model have assumed that the valence components  $\{\lambda_j(x_i)\}$  are all zero and have usually asserted that all candidates would converge to an “electoral mean” when they attempt to maximize their expected vote shares. In the discussion of this model given in Chapter 8, it is argued that, in the situation where the candidate valences differ, this mean voter theorem will only hold when a particular necessary condition is satisfied. The condition depends on the valence differences between candidates, on the coefficient  $\beta$  that specifies the importance of policy, and on the variation of the distribution of voter ideal points, denoted as  $\nu^2$ . Further, the greater the stochastic variance (or uncertainty) of the disturbances, then the easier it is for this condition to be satisfied. In contrast, high electoral variation will tend to produce divergence of candidate positions. The upshot of this analysis is that empirical situations can be found where convergence in candidate positions is very unlikely to occur. Schofield and Sened (2006) give examples from a number of polities based on proportional electoral systems where extreme divergence of party positions is explained by this model.

We can apply this model in various ways. First, consider the pure preference-based “non-stochastic” or deterministic case,  $\varepsilon_j \rightarrow 0$ , where valence is zero. As noted earlier, a very extensive literature has shown

that if decision making is binary (pitting options one against another) and based on majority rule, or more generally on a non-collegial voting mechanism, then “chaos” or disorder can ensue as long as the dimension of  $X$  is sufficiently large. The formal results show that chaos can be prevented by requiring that there be a collegium or veto player. Chapter 2 discusses this possibility in the context of an analysis of decision making in Britain in the seventeenth and eighteenth centuries. The outcome in this situation of a collegium, oligarchy, or autocrat may be a *core* or institutional equilibrium. In the absence of a core, and if the dimension of  $X$  is sufficiently low, then the set of probable outcomes will be restricted, and I shall use the term the *heart* of the institution to refer to this set of possible outcomes.

In the stochastic situation, with  $\varepsilon_j \neq 0$ , it is necessary to focus on the “beliefs” or judgments of the participants.

In the case that  $\beta \rightarrow 0$ , then this is a situation of pure “belief aggregation.” Individuals will choose among the various options with probability determined by the valence judgment that they have made. I suggest that the final decision is often the consequence of what I call a *belief cascade*. As more individuals decide that option  $z_s$ , say, is superior, then other voters will in turn be swayed to form a judgment in favor of  $z_s$ . I use the term *architect of change* for an agent,  $s$ , who is able to trigger this change in the social situation by providing a plausible argument for the option  $z_s$ .

In the more general case with  $\beta \neq 0$ , the valences  $\{\lambda_j(x_i)\}$  and therefore the choices will depend on  $\{x_i\}$ . It may be the case that different and opposed belief cascades are generated in the population. For example, in Chapter 5, I suggest that Lincoln’s arguments about the significance of the Dred Scott decision generated opposing belief cascades in the northern and southern electorates.

More generally, suppose that there is information available to some subset  $M$  of the electorate which is consistent with the judgment

$$\lambda_s > \lambda_{s-1} > \dots > \lambda_1 \quad (1.5)$$

by the members of  $M$ . Then it will be the case that, for every voter  $i$  in  $M$ , the subjective probabilities will be ranked

$$\rho_{is} > \rho_{is-1} > \dots > \rho_{i1}. \quad (1.6)$$

It follows that the majority rule preference within the set  $M$  will choose candidate  $s$  with option  $z_s$  with greater probability than candidates  $s-1$ ,  $s-2$ ,  $\dots$ ,  $3, 2, 1$ . If  $M$  is itself a majority under the electoral rule (or is a winning coalition of more than half the electorate) then candidate  $s$  will

win. When an alternative such as  $z_s$  wins in this fashion, then it will be sustained by a belief (or set of related beliefs) held by a winning coalition. By analogy with the idea of a core, or unbeaten alternative, I use the term *core belief* to refer to this common belief held by such a set of voters.

Condorcet in his *Essai* of 1785 argued essentially that a core belief would tend to be a correct belief.<sup>5</sup> A statement and proof of this result, known as *Condorcet's Jury Theorem*, is given as a short appendix to Chapter 8. The demonstration is given for the case where only judgments are involved, but it is obvious that the result holds in some weaker sense when both interests and judgments are relevant, as long as interests do not predominate. I argue in Chapter 4 that Madison had a version of this argument in mind when he wrote about the "probability of a fit choice" for the President in *Federalist X*. Of course, because interests may intrude in the calculation of a fit choice, we cannot assert, as did Condorcet, that the choice is necessarily superior.<sup>6</sup> Notice also that the electoral rule (such as deployed in the Electoral College) may define a coalition as winning even though it does not comprise a majority. Recent literature has considered extensions of the Jury Theorem when individuals have private information and the decision problem is one of common value, so that all individuals would agree over the correct choice if they had full information.<sup>7</sup> The societal decisions considered in this book have the characteristic that both preferences and beliefs in the society are heterogeneous. I do not attempt to present a full theory of such situations. Instead I hope to combine elements of social choice theory and the theory of elections to present a set of concepts that I feel can be useful in understanding democratic choice.

<sup>5</sup> Roughly speaking, the theorem asserts that, in a binary choice situation, the probability that a majority selects the true outcome will be greater than the probability that a typical individual will select the truth. Rae (1969) and Schofield (1972a, b) used a version of the theorem to argue that majority rule would be "rationally" chosen by an uncertain society as a constitutional rule. The theorem depends on the condition of voter (pairwise) "independence," which is a very strong assumption, and unlikely to be satisfied. Recent work by Ladha (1992) and Ladha and Miller (1996) has attempted to extend the theorem to include correlated choice. Empirical techniques also allow for modelling correlated choices (Schofield et al., 1998; Quinn, Martin, and Whitford, 1999).

<sup>6</sup> Schofield (1972a) noticed the connection between Madison's argument and a version of the Jury theorem. Recently various authors have developed the theme of the "wisdom of crowds" and how they might be swayed (Gladwell, 2000; Ball, 2004; Surowiecki, 2004).

<sup>7</sup> Recent work includes Austen-Smith and Banks (1996, 2005), Ladha (1996), Feddersen and Pesendorfer (1997), McLennan (1998), and Martinelli (2003).

Thus the *core belief* underpins the selection of the option *s*, with the greatest valence. I also use the notion of *the heart of the Constitution* to refer to the configuration of beliefs that form the foundation for social choice at each point in time. A *constitutional quandary* is a situation of great uncertainty in the electorate. In the formal model, this is associated with significant stochastic variance and relatively insignificant valences. According to the standard electoral model all candidates should converge to the electoral center. Another way of expressing this is that the candidates should be risk averse. However, this assertion only holds true if the electoral variation is relatively small. If electoral preferences are very heterogeneous then candidates should rationally adopt very different positions.<sup>8</sup> We might say, for a situation with very great uncertainty, that these candidates for the attention of the electorate are *prophets of chaos*. Sometimes, out of this cacophony of voices, there is one who can overcome the barriers to clear perception and present a sensible way to interpret the quandary. Naturally, this does not always happen. I suggest that a polity will prosper when it is both open to the arguments of such an *architect of change* and able to evaluate the opposing arguments. The *evolution of the Constitution* is due to this continuous process of argument, shifting beliefs, and changing valences.

This model is applied in Chapter 6 to suggest that the changing valences of parties in the United States is due to the influence of activists on candidate positions. This accounts for what I call a *structurally stable dynamic*, involving a slow rotation of party positions in what I consider to be a fundamental two-dimensional policy space based on economic factors and civil rights (Miller and Schofield, 2003). There is some evidence that a two-dimensional policy space is also relevant for Britain (Schofield, 2005a), though I suggest that the second dimension may be derived from, or sustained by, beliefs that were appropriate during the period of the British Empire. While my discussion largely focuses on Britain and the United States, it is the larger question of the evolution of what I call the *Atlantic Constitution*<sup>9</sup> that forms the narrative of this book.

<sup>8</sup> Schofield and Sened (2006) show for example why the combination of stochastic and electoral variation leads to many small, radical parties in Israel. Chapter 6 applies a version of this model to presidential elections in the United States.

<sup>9</sup> Bailyn (2005) argues that all the polities on the Atlantic littoral are connected through a common history. It seems natural to refer to the *Atlantic Constitution* as the set of political, economic, and social beliefs common to these polities.



#### 1.4 THE "INSTITUTIONAL NARRATIVE" OF THE BOOK

Here I shall briefly sketch the narrative scheme that I shall use, based on the ideas of social choice and on the notion of factor coalitions forming in the policy space. Rogowski (1989) earlier made use of the assumption from economic theory that there can be assumed to be three factors of production: land, labor, and capital. External and internal features may grant advantages to particular coalitions of these factor "interests." For example, the United States in the late 1700s could be characterized as abundant in land, with both labor and capital relatively scarce. Principal imports were manufactures, intensive in capital and skilled labor. Thus protection in the form of tariffs would necessarily benefit capital and "industrial labor." In contrast, since land was abundant, this economic interest, together with "agricultural labor," would benefit from free trade. Consequentially, the political conflict between the commercial Federalist Party and the agrarian Jeffersonian Republicans, at the election of 1800, can be interpreted in factor terms. However, some of the elements of the controversy of that time can only be understood with respect to earlier factor conflicts in Britain, in the period from 1688.

North and Weingast (1989) had argued that the creation of the Bank of England in 1694 provided a method of imposing credible commitment on Parliament. The dilemma facing any government of that time was that war had become more expensive than government revenue could cover. Consequently, governments, or monarchs, became increasingly indebted. Risk-preferring, or war-loving, monarchs, such as Philip II of Spain or Louis XIV of France, were obliged to borrow. As their debt increased, they were forced into repudiation, thus making it more difficult in the future to borrow. Since the Bank of England "managed" the debt in Britain after 1694, there was an incentive for Parliament to accept the necessary taxation and to avoid repudiation. However, it was clear after 1688 that William III would pursue the war with France with great vigor and cost. Contrary to the argument of North and Weingast, this escalating debt could, in fact, force Parliament to repudiation. Until 1720, it was not obvious how Parliament could be obliged to commit to fiscal responsibility. How this was done was through the brilliant strategy of Robert Walpole, first "prime" minister.

The fundamental problem was that the majority of members of both Commons and Lords were of the landed interest. The obvious method of funding government debt (which had risen to 36 million pounds sterling

by 1713) was by a land tax. Indeed the land tax raised approximately 50 percent of revenue. War weariness had brought in a Tory government in 1710, and the obvious disinclination of the Tory landed gentry to pay increasing land taxes forced up the interest rate on long-term government debt from 6 percent to 10 percent (Stasavage, 2002). In some desperation the government created the South Sea Company in 1711. After Queen Anne died in 1714, and the Hanoverian, George I, became sovereign, increasing speculation in South Sea Company stock, and then the collapse of the “bubble” in September 1720 almost bankrupted the government. Walpole stabilized confidence in the company by a swap arrangement with the Bank of England. In April 1721, Walpole, then Chancellor of the Exchequer and First Lord of the Treasury, began his scheme to stabilize government debt by instituting a complex system of customs and excise. By restricting imports, mostly foodstuffs and land-intensive commodities, this system had the effect of supporting the price of the scarce commodity, land. From 1721 to 1740, these excise taxes and customs raised an increasing share of government revenue. As Brewer (1988) has described, the system required a sophisticated and skilled bureaucracy. The Walpole device had many effects. Firstly, it ushered in a long period of Whig dominance (at least until the 1800s). Protection of land remained in place until the repeal of the Corn Laws in May 1846. As McLean (2000) has described, the repeal was effected by Robert Peel, leader of the Tories (or conservatives), together with Wellington in the Lords, against the interests of the majority of their party. Famine in Ireland made it obvious to Peel and Wellington that unless food prices were lowered social unrest could lead to civil strife. The Walpole “bargain” of 1721 essentially created a compact between the “commercial” Whig interests and both Whig and Tory “landed” interests. By supporting land prices, the bargain led to increased investment in agriculture and (possibly counter intuitively) the decline of the agricultural labor force. Increased food prices may have reduced the real wage of industrial labor (Floud and McCloskey, 1994). Although agricultural output increased in Britain, the population grew even more rapidly, and Britain became increasingly dependent on food imports, particularly from the United States.

Jefferson was well aware of the implications of the Walpole bargain. His reading of the works of Henry St. John, Viscount Bolingbroke, led him to believe that the land-capital bargain led to corruption, as well as the filling of Parliament by placemen. In fact, Bolingbroke’s arguments against Walpole were, to some degree, invalid, since the compact did make it possible for Britain to manage its debt, fight its wars, and create an empire.