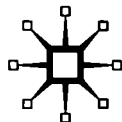


Rational Choice

Andrew Hindmoor

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*In memory of Irene Hindmoor and Helen Langham
who never met but whose lives became entwined*

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Preface

The aim of this book is to provide an accessible and balanced introduction to rational choice theory which connects its debates and arguments to those in other areas of political science. Truth be told when I was asked to write this book I had just completed a lengthy research manuscript and was hoping to write a simple textbook which would take little time and effort to complete. I have spectacularly failed to achieve this particular ambition. As no doubt any of the other authors in the *Political Analysis* series could have told me, writing a book which can 'provide a channel for different parts of the discipline to talk to one another and to new generations of students', to cite one of the objectives of the series, is a far from easy business. Completing the book has taken me a great deal of time and no little effort. I can only hope I have been slightly more successful in achieving my other ambitions for it.

I wanted to write a book which was accessible because the proliferation of mathematical models and quantitative data analysis within rational choice theory deters many students from coming to grips with its underlying assumptions and arguments. This is a shame because no matter how much they are feared and loathed, mathematical modelling and quantitative data analyses are useful techniques which undergraduate programmes in political science ought to be teaching. It is also a shame because, as I try to show in what follows, rational choice theory's assumptions and arguments can be introduced and critically analysed without having to learn these techniques. There is no doubt a strong case to be made for a textbook which provides an introduction to mathematics, data analysis *and* rational choice theory. But this is not that book. Although it contains occasional tables and even the odd diagram, the book assumes no prior knowledge of or particular interest in either rational choice theory or counting.

In the opening chapter of the first volume of Douglas Adams' celebrated five-part science-fiction trilogy, we are told that, in many of the more relaxed civilizations on the Outer Eastern Rim of the Galaxy, *The Hitch Hiker's Guide to the Galaxy* has already supplanted the great *Encyclopaedia Galactica* as the standard repository of all knowledge and wisdom. It has done so because although it has many omissions

and contains much that is apocryphal, or at least wildly inaccurate, it scores over the older, more pedestrian work because it is slightly cheaper and has the words 'Don't Panic' inscribed in large friendly letters on its cover. In many ways 'Don't Panic' would have made a suitable subtitle for this book. For although it no doubt contains many sins of both omission and commission, I feel reasonably confident in stating that nobody will find it difficult to understand.

The emergence and development of rational choice theory has polarized political science. Rational choice theorists tend to argue that their approach has revolutionized the study of politics as an academic discipline, whilst rational choice's many and varied opponents argue that it is all mouth and no trousers; that its success marks the triumph of dazzling technical style over explanatory substance. Rational choice theory, this argument runs, makes a series of implausible assumptions about the reasons why people behave in particular ways and so, unsurprisingly, finds itself offering deeply flawed explanations of why particular events occur. Although this argument about the explanatory value of rational choice theory can sometimes make for quite entertaining exchanges in the pages of otherwise rather dry academic journals, it makes the method a difficult one to come to grips with. It is for this reason that I wanted to write a balanced introductory text in which space is given over to both rational choice's proponents and opponents. I need to be careful here because I also use this book to develop my own argument about the status of rational choice theory. And whilst this argument is itself a balanced one in the sense that it identifies both strengths and weaknesses in the rational choice method, a bias towards the middle of the road is a bias nevertheless. Yet by the time I develop this argument in the closing chapters, I hope to have provided enough material for readers to reach very different judgements.

It is one of the more puzzling and less attractive features of the way in which political science is taught in universities today that so few connections are made between different subjects. Although they usually occupy the same building within social science faculties, politics is routinely taught without any regard to or apparent interest in economics, sociology or psychology. Furthermore, and although they are usually taught by people occupying the same corridor, individual courses in political theory, public policy, comparative politics and international relations (especially international relations) are usually taught in splendid isolation of each other. Very rarely are students in, for example, a public policy tutorial asked to discuss how arguments about the nature of justice ought to impact upon the study of public

policy. I find rational choice theory an enjoyable subject to teach and think about because it draws upon (even if it often offends) a range of social sciences and because its arguments can easily be applied to and compared and contrasted with those in other areas of political science. Because rational choice theorists rely upon a very different set of analytical techniques from other political scientists, it is easy to assume that they must be talking about a very different set of subjects. Yet this is simply not the case. In writing about political parties, constitutions, interest-groups, the state, justice and political instability, rational choice theorists are writing about the same subjects as their colleagues. In writing this book I wanted to show above all else how rational choice connects to and compares and contrasts with other areas of political science.

Although I wrote most of this book whilst working at Exeter University, I have recently moved to the University of Queensland where the finishing touches have been added. My greatest debt is to colleagues who make Exeter and Queensland such enjoyable places to work. Steven Kennedy of Palgrave Macmillan and Gerry Stoker persuaded me to write this book for the *Political Analysis* series and, together with a number of anonymous referees and the other series editors, provided extensive and valuable feedback on early drafts of this manuscript. In terms of my broader debts, I owe a great deal to Keith Dowding, who first taught me about the possibilities of rational choice theory, and to Iain Hampsher-Monk, who encouraged me to think more critically about its limitations. To J, J and A I owe a great deal more.

ANDREW HINDMOOR

The author and publishers would like to thank the following who have kindly given permission for the use of copyright material: Michael Laver and Kenneth Shepsle and Cambridge University Press for permission to reproduce in slightly adapted form Figures 3.2 and 3.3; Oliver James and Palgrave Macmillan for permission to reproduce Figure 6.4.

Introduction

Rational or, as it is sometimes known, public choice theory, is one of the most influential and undoubtedly controversial theories used to study politics. Its proponents regard it as having developed 'insightful, rigorous, [and] parsimonious' explanations of political outcomes (Monroe, 1993: 2). William Riker (1990) goes so far as to suggest that it is political scientists' past reluctance to embrace rational choice theory which explains why their discipline has lagged so far behind the natural sciences. Rational choice theory's opponents argue that it has, at best, been used to restate what everyone already knows in a language few can understand and, at worst, that it has propagated entirely bogus explanations and legitimized disastrous policy choices. This book aims to provide a accessible account of the origins, assumptions, and applications of rational choice theory and a balanced assessment of its strengths and limitations.

Rational choice can be defined as involving the application of the methods of economics to the study of politics (Mueller, 2003: 1). What does this method consist of? Five guiding principles or assumptions can be identified.

- 1 *The assumption of methodological individualism.* Rational choice theorists, like economists, explain outcomes and events in terms of the attitudes, expectations and interactions of individual actors; whether they are bureaucrats, politicians or voters. More precisely, they argue that political processes and outcomes are *completely* determined by the actions of and interactions between these individuals. There is a long-standing dispute within the social sciences between those who emphasize the capacity of agents to shape their environment (that is, those who emphasize agency) and those who regard agents as being products of and so constrained by their environment (that is, those who emphasize structure) (see Hay, 2002: 89–96). Rational choice theorists recognize that structures determine the range of choices open to individuals, but, ultimately, they account for outcomes in terms of the choices individuals make. They emphasize agency over structure.

- 2 *The use of models.* Rational choice theorists approach the problems they wish to tackle by constructing analytical models. A useful distinction here is between inductive and deductive approaches to the social sciences. One way social scientists can approach problems is by collecting data on the subject they are interested in and by then looking for and explaining patterns they find in it (induction). Alternatively, they can start by thinking about the way in which actors might behave in a particular situation, using data to test whether their hypotheses are correct (deduction). Rational choice is a deductive method in which practitioners construct deliberately simplified models to help them think about the ways actors might behave (see Box 1.1).
- 3 *The assumption of rationality.* I examine the concept of rationality in some detail in Chapter 8. For the moment, and as a bare minimum, it can be said that rational choice theorists employ an *instrumental* concept of rationality in which actions are judged as being rational to the extent that they constitute the best way of achieving some given goal. Rationality is, in other words, about means rather than ends. Someone who wants to achieve a goal most of us would consider either pointless (learning to talk backwards) or morally abhorrent (stealing someone else's belongings) can nevertheless be described as rational if they go about achieving this goal in the best possible way. The distinction between means and ends is not, it ought to be acknowledged, always clear-cut. At any one time people presumably have a large number of goals some of which they regard as being more fundamental than others. On this basis we might therefore describe the pursuit of one goal as being irrational if it can only be achieved at the expense of another, and more important, one. A person who wants to lose weight might have good reason to take up smoking in order to suppress their appetite but not if their overriding goal in life is to live to be a hundred. Yet, at some point, some of the goals people have are fundamental and cannot, rational choice theorists would maintain, be described as being rational or irrational.
- 4 *Self-interest.* It is a noteworthy feature of the instrumental conception of rationality that people can act rationally whether the goals they pursue reflect their own interests, the interests of other people, or some mixture of these two. Rationality does *not* imply egoism. Yet partly out of a conviction that this is how people really *are* and partly on the methodological grounds that such an assumption is needed to construct parsimonious models, rational choice theorists

Box 1.1 Models

When scientists (whether natural or social scientists) study a part of the world, they nearly always try to construct a model of it. What is a model? People usually think of models as small objects which, in perfect scale, exactly represent some larger object. That is, they think of model aeroplanes and model cities. Models of this sort are 'isomorphic' in the sense of having a high degree of correspondence with the object of which they are a model. Scientific models are *not* models of this sort. They are, instead, attempts to pick out the *essential* features of some situation. Models are, in this sense, idealizations which, although flawed representations of the world, can nevertheless help us understand something about that world (Cartwright, 1983). In this sense, the role models perform within science is analogous to that played by metaphors in language. Metaphors such as a 'run' on a currency, although in one sense obviously false, are extremely useful in so far as they help us to understand abstract concepts and ideas by relating them to, in this case, direct physical experiences with which we are familiar and comfortable (Lakoff and Turner, 1989). In a similar fashion, models, although inaccurate, can help scientists to understand the world around us.

What are the essential features of some situation which a model must pick out? The answer to this question will depend upon what the model is being used for. Consider the iconic map of the London Underground now used to decorate not only tube stations but various kinds of tourist tat. This map, designed by an electrical engineer, Harry Beck, in 1931, shows which stations are on which lines and at which stations it is possible to change from one line to another. Is the map a useful one? If you are using it to plan a journey it is incredibly useful because it includes all the essential information you need about when and where to change lines. But if you are using it to calculate the length of a journey, the same map is almost entirely useless because it is geographically inaccurate (compare the standard map with the geographically accurate one at <http://solo2.abac.com/themole/maps.html>). Indeed it was precisely for this reason that London Transport initially rejected Beck's design.

What is the relationship between models and theories? (1) Theories provide inputs into models. Models are constructed out of assumptions and rational choice theory, which assumes, among other things, that actors are rational and self-interested, provides rational choice theorists with a particular set of assumptions to make. (2) Theories are a way of describing the outputs of models. When it is claimed that some model can tell us something about the 'real world', it can be described as constituting a theory. So, in subsequent chapters we will, for example, talk about rational choice theories of party competition derived from particular models of party competition.

have tended to assume that bureaucrats, politicians and voters, regulators, interest-group members and other political actors are entirely self-interested. There are some notable exceptions to this general rule. Some of the models of coalition-building we will examine in Chapter 3 assume that politicians are driven by a desire to see particular policies implemented. But it is egoism and not altruism which underpins most of the models we will examine in this book.

- 5 *Subjectivism (political individualism)*. Methodological individualism and rationality involve making claims about how the world *is*. They tell us nothing about how they world *ought* to be. Rational choice theorists, like economists, combine their methodological individualism with a commitment to political individualism (on this distinction see Blaug 1980: 45–7). They argue not only that individuals have preferences which they seek to satisfy but that the satisfaction of these preferences ought to be the criteria by which policies and institutions are judged. Rational choice theorists thereby reject a ‘truth-judgement’ conception of politics in which it is maintained that ‘political and political-governmental institutions . . . exist as a means through which the unique nature of the “good society” is discovered and/or revealed’ (Buchanan, 1975: 15). What counts for rational choice theorists is what people want.

Rational choice theory’s use of these methodological assumptions and principles is, and here I am being deliberately understated, quite contentious. Although Green political theorists sometimes argue that the environment ought to be preserved *regardless* of whether or not it is in humanity’s long-term interests to do so (see Goodin, 1992), subjectivism is, in secular societies at least, now a relatively uncontroversial principle. The same cannot be said for the other four assumptions. Many (if not most) political scientists would argue that induction is more productive than deduction, that individuals operate with, at most, a ‘bounded’ rationality (see Box 1.4 below) and that structure is either more important than agency or that structure and agency are codetermined. Finally, most political scientists would join with casual observers in arguing that people are not simple, self-interested, automata.

The assumption of self-interest has a particularly curious status. On the one hand it is consistent with and may indeed have contributed to the growth of tabloid political culture which maintains that politicians will say or do anything to get re-elected, that bureaucrats are lazy and self-serving and that local government officials are all on the make (on

the 'reflexivity' of rational choice theory see Box 6.3 in Chapter 6). Yet, at the same time and with very little difficulty, most of us can think of people whose behaviour seems to run entirely contrary to the assumption of self-interest. For we live in a world in which politicians sometimes go to jail for their beliefs and in which millions of people volunteer to defend their country in times of war, give blood and donate money to charity. Rational choice theorists, however, have developed a range of 'self-interested' explanations for such behaviour. Jailed politicians, for example, are seeking to establish their reputation for trustworthiness, soldiers are trying to escape from the tyranny of domestic routine and blood donors are trying to impress their friends. But in my experience people do not find such rationalizations persuasive. They may fit all the available facts but they do not 'ring true'. At the risk of sounding somewhat trite, most of us have no difficulty in accepting that some people are self-interested all the time and that everyone is self-interested some of the time, but we balk at the notion that everyone is self-interested all of the time.

Economists deal with objections to methodological individualism, model-building, rationality and the assumption of self-interest by largely ignoring them. That is why undergraduate economics textbooks usually devote no more than a handful of pages to the justifications of and possible objections to the use of the economic method (see, for example, Stiglitz and Driffill, 2000: 14–18; Begg, Fischer and Dornbusch, 1994: 11–16; Samuelson, 1976: 7–12; and Soloman, 1994: 26–9). Economists can avoid having to gaze at their own methodological navels because self-styled heterodox approaches to the study of economics, in which alternative assumptions and principles are employed, have been almost entirely squeezed out of undergraduate economics programmes (Foldvary, 1996).

The same is most certainly *not* true of political science, a subject in which there is no established theoretical orthodoxy and in which, as we will soon see, rational choice theory has come under frequent and sustained attack. The claim that people are rational and self-interested must therefore not only be stated but defended and assessed. In terms of the layout of this book, the most obvious place to do this would be in the first few chapters. What I will actually do, however, is postpone the discussion of rationality, together with that of the nature of rational choice explanations, until the final two chapters. This is for two reasons. Firstly, and most importantly, it is because I think that a more valuable 'first impression' of rational choice theory can be gleaned from the discussion of applied arguments in which the assumptions of

rationality and self-interest have, so to speak, been 'cashed-out'. Secondly, it is because the arguments in these chapters unavoidably draw upon sometimes quite complex philosophical arguments that it will be easier to illustrate and so understand once specific theories and models have been examined. Before immersing ourselves into the practical details of rational choice theory I will however use the rest of this chapter to provide a general historical sketch of the origins and development of rational choice theory.

The marginal revolution and the methods of economics (1870–1950)

Economics and politics are today taught as very different subjects in separate university departments. But theirs has been a relatively recent estrangement. Until the later part of the nineteenth century, there was, in the place of the separate disciplines of economics and politics, a single subject of political economy generating such classic texts as Adam Smith's (1776) *Wealth of Nations*, David Ricardo's (1817), *Principles of Political Economy and Taxation*, James Mill's (1844), *Elements of Political Economy*, John Stuart Mill's (1863) *Utilitarianism* and Karl Marx's (1867) *Capital*. To have suggested to such 'Classical' political economists that economic decision-making could be studied independently of political decision-making would have been to invite ridicule. The separation between economics and politics can be traced back to the 'marginalist' revolution triggered by the publication of Carl Menger's (1871) *Principles of Economics* and Leon Walras' (1874), *Elements of Political Economy* and the subsequent emergence of a 'neo-classical' school of economics. I do not want to be trapped here into discussing the frequently technical and sometimes quite peculiar details of economic theory in any great detail. But for reasons that will subsequently become apparent, I do want to say a few words about the form this revolution took.

Classical and neo-classical economics share a commitment to methodological individualism, model-building and political individualism and both regard individuals as being essentially rational. At one level, the difference between them hinges upon a seemingly trivial detail. Classical economists like Smith and Ricardo accounted for the price of a good in terms of the costs involved in making it. To put it crudely, they saw price as being a matter of supply. Neo-classical economists argue that price is determined by the usefulness or marginal utility of goods

for consumers. For them, price is, in other words, a matter of demand. A number of other differences between classical and neo-classical economics can however be identified (also see Schumpeter, 1954: 527–74). Firstly, whereas classical economists were interested in economic development, a necessarily dynamic process, neo-classical economists are more interested in understanding how, in static terms, markets allocate resources. Secondly, whereas classical economists assumed that people were largely but *not* exclusively self-interested, neo-classical economists make no such qualification. Finally, whereas classical economists relied upon verbal expositions, neo-classical economists champion the use of mathematical analysis.

The neo-classical revolution in economics was not a peaceful one. During the late 1880s and early 1890s the ‘German Historical’ School led by Gustav Von Schmoller and an ‘Austrian’ School led by one of the founders of the marginal method, Carl Menger, fought a bitter ‘*methodenstreit*’ (literally, dispute over methods). The Germans argued that individuals’ preferences and actions are shaped by unique institutional environments and insisted that the proper way to do economics is by means of detailed historical research without the assistance of any general models (see Kirzner, 1992: 87–91). But this was a battle the Germans lost. By the 1920s the *methodenstreit* was over and neo-classical economics had emerged victorious. Its preeminence was briefly threatened by the development of Keynesian economics in the 1940s, but even this challenge was eventually crushed. Why did neo-classical economics triumph over classical economics, Keynesianism and German institutionalism? Its proponents argue that it did so because it can be used to make precise predictions about economic events whilst, at the same time, showing how apparently unrelated forms of behaviour can be accounted for using the same basic set of principles and assumptions.

The emergence of rational choice (1950–70)

The academic discipline of politics first began to attract significant funding during the Second World War when governments funded large-scale research into recruitment, propaganda and decision-making (Almond, 1996). In the immediate postwar years, many of the pioneers in developing the theoretical foundations of the subject were ‘behaviourists’ who collected and analysed data about, for example, voting behaviour (Campbell *et al.*, 1954, 1960) and the outbreak of

war (see Singer, 1963) (see Box 8.1). Behaviourists, many of whom were initially based at the University of Michigan, hoped that by finding recurring patterns in this data they could both predict and explain changes in party support and outbreaks of war. Behaviourism, with its use of quantitative techniques and invocation of behavioural 'laws', certainly promised a more scientific approach to the study of politics. But behaviourism did not constitute an 'economic' approach to the study of politics. It relied upon induction rather than deduction and emphasized limits to rationality. The analysis of voting behaviour, for example, led behaviourists to argue that, far from looking carefully at and choosing between parties, voters developed largely unreflective 'identifications', for example derived from and predictable in terms of their parents' social class. Then, in the late 1950s and early 1960s, and at a time when behaviourism was the established orthodoxy, a small number of economists and one political scientist, William Riker, started to apply the tried, tested and apparently successful methods of economics to the study of politics. The result was a series of now classic works including Anthony Downs' (1957), *An Economic Theory of Democracy*, William Riker's (1962), *The Theory of Political Coalitions*, and Mancur Olson's (1965), *The Logic of Collective Action*.

It is one of the hallmarks of the natural sciences that students tend not to get taught about their chosen subject's history. First-year undergraduates in physics are not given lectures on the achievements of Henry Cavendish (who, amongst other things, conducted pioneering work on the nature of electricity) or John Dalton (who is usually credited with having first sought to distinguish elements in terms of their atomic composition). Whether or not in other (more important) respects rational choice ought to be counted as a science, rational choice theorists certainly adopt the same pedagogical stance as natural scientists. Textbooks tend to offer painstakingly detailed reviews of the latest rational choice fads, techniques and theories at the expense of detailed histories of the subject. That they do so is, I think, a mistake. Economists frequently talk about economic growth or institutional development as being 'path-dependent' (see Box 1.2). What they mean by this is simply that history matters and that to understand how and why we have got to where we are we need to know where we started from. In this surely very obvious sense, rational choice is path-dependent. If we are to understand today's rational choice agenda, we first need to understand what rational choice theorists were trying to do three or four decades ago. In the preface to a reprint of *Economists, Sociologists and Democracy*, one of the earliest and still most impressive reviews of rational choice theory,

Brian Barry (1978: i) writes of Downs' *An Economic Theory* and Olson's *Logic of Collective Action* that

they are still the best place to start [a review of rational choice], and I believe that all the important questions about the uses and limitations of the 'economic' approach can be raised by analysing them.

I share Barry's conviction. For this reason, the following chapters devoted to the consideration of particular areas of rational choice theory all start with the discussion of one classic text: Anthony Downs's (1957) *An Economic Theory of Democracy* which examines the dynamics of party competition in systems in which there are two dominant parties (Chapter 2); William Riker's (1962) *The Theory of Political Coalitions* which examines the dynamics of coalition formation in multi-party systems in which no one party is able to command a legislative majority (Chapter 3); Kenneth Arrow's (1951) *Social Choice and Individual Values* which examines and questions the possibility of aggregating individual preferences in such a way as to generate a coherent 'social choice' (Chapter 4); Mancur Olson's (1965) *The Logic of Collective Action* which analyses the circumstances in which individuals will find it in their individual interests to jointly pursue shared collective interests (Chapter 5); William Niskanen's (1971) *Bureaucracy and Representative Government* which accounts for the growth of democratic states in terms of the activities of budget-maximizing bureaucrats (Chapter 6); and Gordon Tullock's (1967) 'The Welfare Costs of Tariffs, Monopolies and Theft' which addresses the way in which interest-groups and firms can use the political process to pursue their own, sectional, interests (Chapter 7).

The take-off to growth (1970–94)

In 1965 James Buchanan and Gordon Tullock, the authors of a path-breaking work on constitutional political economy, *The Calculus of Consent*, which we will examine in Chapter 7, established the Public Choice Society. The following year Tullock edited the first volume of what was soon to become the 'house' journal of rational choice theory, *Public Choice*. Over the following decade, rational choice began to attract more adherents as its basic concepts and techniques were applied to an ever-growing number of subject areas. By the early 1990s, the high-water mark of rational choice's influence, fully 40 per

Box 1.2 Path-dependency

At its simplest, those asserting the existence of a 'path-dependency' are simply claiming that what happened in the world yesterday will affect what happens in the world tomorrow. Within 'historical' institutionalism, path-dependency is, for example, frequently invoked to explain why, in a world that is supposedly becoming more 'globalized', distinctive national policies and policy approaches nevertheless endure (Pierson, 1993, 2000). Here, path-dependency is said to exist because (i) political institutions which affect policy outcomes are difficult and costly to reform; (ii) particular policies, once implemented, create vested interests willing to fight for their maintenance; (iii) policy styles or mind-sets such as a propensity for central planning get transmitted to new generations of policy-makers (see Dobbin, 1994); (iv) policy ideas imported from abroad are blended with local practices in order to make them more politically palatable.

All this is no doubt both interesting and important, but path-dependency, as it is understood by economists and rational choice theorists, points to something slightly different: the way in which small, apparently insignificant, events can become 'locked-in' with unexpectedly long-term and inefficient consequences (North, 1990). Consider the following example (Arthur, 1989). There are two technologies, A and B: the financial returns from using a particular technology depend, as shown below, on the number of other people using it. Assume that, at any one time, a person's choice of technology depends exclusively upon the profits they expect to

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cent of the articles published in the world's most prestigious political science journal, the *American Political Science Review*, used rational choice theory (Green and Shapiro, 1994: 3). In addition to the topics covered in this book, rational choice theorists had also applied their methods, *inter alia*, to the study of dictatorship, Marxism, distributive justice, federalism, campaign contributions and the separation of powers (see Box 1.3). At this time it was routinely claimed that rational choice had 'fundamentally changed' the study of politics (Lalman *et al.*, 1993: 79). In a review article published to celebrate the twenty-fifth anniversary of *Public Choice*, one leading practitioner, Dennis Mueller (1993: 147), predicted not simply that rational choice would 'dominate political science in a generation or less' but that alternative approaches to the study of politics would eventually wither away and die.

It was during this period of growth that the political as well as methodological commitments of rational choice theory became apparent. One of the great achievements of postwar neo-classical economic

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make. The first person to adopt the technology will therefore choose A rather than B (£10 > £8). The second person to adopt the technology will also choose A, and so on, as the comparative advantage of A over B rises from £2 when there are no other users, to £10 when there are 80 users (when there are 80 users the returns from technology A will be £18). At this point, however, the first person using technology B will still only gain £8. Yet notice that, as the number of users grows, technology B starts to yield higher returns. If 30 users could choose which technology to use, they would choose B. Yet by the time there are 30 users, technology A will have become 'locked-in' and it will not make any sense for any *single* user to switch to B.

Number of other people using . . .	0	10	20	30	40	50	60	70	80
Technology A (£)	10	11	12	14	14	15	16	17	18
Technology B (£)	8	10	11	16	16	19	22	25	28

As a celebrated example of such a process consider the use of the QWERTY keyboard (Krugman, 1990). According to one version of this story, QWERTY was designed in order to reduce typing speed and so lower the risk of manual typewriters jamming. Although other layouts allow people to type more quickly on today's electronic keyboards, QWERTY remains the industry-standard because it would be prohibitively expensive for any one country or firm to retrain people to type in a different way.

theory had been the demonstration that, in conditions of perfect information and perfect competition, markets would clear, allowing profit-maximizing firms and utility-maximizing consumers to achieve a welfare-maximizing equilibrium (Arrow and Debreu, 1954). Perfect markets would generate perfect results, and at a time when America was fighting the early stages of the Cold War this was an obviously significant finding. Yet, as many economists soon recognized, one obvious implication of this is that imperfect markets can be expected to generate imperfect results and that market failures (see Box 6.1) provide a *prima facie* justification for state intervention. Take, for example, the case of monopoly. For competition to be perfect, there must be a large number of buyers and sellers who are individually unable to influence price. But in the real world many industries are controlled by, at most, a handful of firms who can exploit their monopoly position and increase their profits by raising their prices and reducing the quantity they supply to the detriment of consumers (pp. 157–8).

Box 1.3 Developments in rational choice

Dictatorship. Most rational choice theory continues to analyse the behaviour of political parties, bureaucrats, interest-groups and other actors in democratic systems. In recent years a number of theorists have however begun to study the origins of dictatorship (Olson, 1993, 2000), the limits of dictatorial power (Tullock, 1997), the circumstances in which dictatorships survive, and the respective economic performance of dictatorships and democracy.

Analytical Marxism. In the 1980s a number of theorists began to re-examine and recast Marxist arguments about exploitation (Roemer, 1982), ideology (Elster, 1985) and electoral socialism (Przeworski, 1985) using rational choice analysis (see Mayer, 1994, for a general review and Roemer, 1988, for a general collection of essays). Although this line of research appears to have largely run its course, Analytical Marxism did, for a short time, open-up rational choice theory to a very different audience.

Distributive justice. Political theorists have traditionally concerned themselves with questions about the nature of justice. In recent decades they have often used rational choice theory to animate their arguments about bargaining, co-operation and the viability of social contracts (see Rawls, 1970; Barry, 1989; Gauthier, 1986). Rational choice theorists (Roemer, 1996) and, in particular, game theorists (Binmore, 1994, 1998), have responded by reanalysing established arguments about social justice.

Federalism. As the majority of rational choice theorists are American, it is perhaps not surprising that many rational choice theorists have recently devoted their energy to subjects such as federalism, campaign contributions and the separation of powers. In the case of federalism, theorists have sought to identify the circumstances in which federal systems will be more efficient than unitary ones, to account for the division of spending between state and federal government in policy areas, and to explain the relative growth of federal government in recent decades (Filippov, Ordeshook and Svestova, 2001; Volden, 2005).

Campaign contributions. Politics in America is big business with Presidential races attracting millions of dollars of campaign contributions. Rational choice theorists have sought to explain when, why and to whom firms and interest-groups will make campaign contributions, what policy concessions a vote-maximizing politician may be prepared to make in order to attract these contributions and whether and when differences in spending power between candidates can affect election results (Poole and Romer, 1985; Peltzman, 1984).

Separation of powers. In Chapter 6 I briefly examine the relationship between and respective powers of Congress and the bureaucracy. The arguments examined here form part of a large body of work dealing with interactions between Congress, the President and the judiciary (Kiewiet and McCubbins, 1988; Krehbiel, 1998).

In such conditions welfare economists argue that the state can protect consumer's interests by intervening to either break-up the monopoly or regulate its prices. So whilst the development of neo-classical economics is often associated with and taken to have promoted the development of *laissez-faire* politics, it actually, and unexpectedly, provided a rationale for a more active, interfering, government (Hindmoor, 2005).

Rational choice theorists argued that whilst economists had shown how and why markets might be expected to fail, they had assumed rather than demonstrated the ability and willingness of the state to correct these failures. Economists had, in other words, made an entirely misleading comparison between imperfect markets and a perfect state and so had, unsurprisingly, found in favour of the latter. In actual fact, rational choice theorists argued, the state could be expected to fail for many of the same reasons as markets, rendering government intervention counter-productive. So, for example, William Niskanen (1971) argued that bureaucrats would exploit their monopoly position to inflate their own budget (see Chapter 6) whilst Gordon Tullock (1967) argued that the state would use its monopoly control of economic policy to effectively 'sell' policy favours to firms and pressure groups, so compromising economic efficiency (see Chapter 7).

During the 1970s and 1980s, these arguments about state failure provided intellectual ammunition and a burgeoning policy agenda for New Right politicians in Britain, America, Australia and New Zealand (see Dunleavy and O'Leary, 1987; King, 1987; Self, 1993; Stretton and Orchard, 1994). The influence of rational choice theorists at this time was usually exercised via right-wing think-tanks like the Cato Institute in America and the Institute for Economic Affairs in Britain. Starting in the mid-1970s, these groups disseminated and, to an extent, popularized rational choice theory (Cockett, 1995). In other cases, rational choice theorists acquired more direct influence. William Niskanen chaired President Reagan's Council of Economic Advisors whilst Mancur Olson, who founded the Centre for Institutional Reform and the Informal Sector at the University of Maryland, advised the Soviet government on market reform and privatization.

This does not mean that rational choice theory is inherently right-wing (see Dowding and Hindmoor, 1998). Indeed, in the case of collective action, for example, rational choice theory can be used to defend the role of the state over that of the market (Barry, 1989) (see p. 113). The point I am making here is simply that rational choice rose to both academic and political prominence in the 1970s and 1980s partly because it inspired the policies of the New Right.

A difficult decade (1994–2004)

Although rational choice was dominating the pages of the *American Political Science Review* in the early 1990s, its position was, in other respects, a surprisingly precarious one. In America, the majority of political scientists remained, at best, ambivalent about its use. In continental Europe a Public Choice Society had been created in 1972 but largely attracted the interest of economists rather than political scientists. In Britain a detailed textbook survey of this new and apparently all-conquering method was not published until 1987 (McLean, 1987). Outside of a handful of politics departments, most notably those at Essex and the London School of Economics, British practitioners struggled to acquire institutional footholds let alone strangleholds. If there was a rational choice revolution in political science the 1970s and 1980s it would appear that it was a Bolshevik one led by an elite and unrepresentative vanguard of the international political science community.

Throughout the 1970s and 1980s, a steady stream of books and articles appeared attacking the scientific pretensions and the implausibility of the assumptions of rational choice theory. More informally, and in the safety of their own studies and seminar rooms, its critics argued that rational choice had flourished not because it was better a theory, but because its practitioners had promoted their own interests by appointing each other to vacant lectureships. In Britain the head of one politics department was quoted in a national newspaper as saying of rational choice theorists that they are ‘incapable of appointing other than their own: the more vulgar they are the more this is true’ (Jacobsen, 2001). Frequently voiced criticisms of rational choice included the following:

- People are not rational in the sense that they always select the best action to achieve a given goal. People are instead, and at most, boundedly rational (see Box 1.4).
- People do not always act in instrumentally rational ways. In their political activities they often act ‘expressively’ to demonstrate their commitments to particular projects or values (see Box 7.2) or ‘procedurally’ to conform with particular norms (see Box 5.5), conventions and customs.
- People are not exclusively self-interested. They are driven both by ‘sympathy’ with the interests of other people and ‘commitments’ to particular goals and modes of behaviour that are routinely honoured

in the absence of any direct attachments to the people so affected (Sen, 1977, 2002).

- In its focus upon individual agency rational choice ignores the institutional, cultural and social constraints which lead people to behave in predictable and not necessarily instrumentally rational ways. In particular, rational choice theory ignores the impact of class, ideology and power upon individual action (see Hindess, 1988).
- Although appearing to affirm the importance of individual agency, rational choice theory actually denies the reality of that agency by assuming not only that actors are all rational but that they all reason in the same way. In doing so, it is argued, rational choice denies the existence of both of freedom of will and individual creativity.
- Through its assumption of self-interested behaviour, rational choice promotes private ownership, competition and incentives. In doing so, rational choice has become a self-fulfilling prophecy. By emphasizing the extent to which people act in self-interested ways it has simply legitimated such behaviour.

Perhaps imitating the behaviour of their economist cousins, rational choice theorists at first dealt with these criticisms by largely ignoring them. When they did choose to respond, they argued that their critics had simply failed to take note of rational choice's many and varied achievements in explaining and predicting political behaviour. Then, in 1994, two political scientists at Yale University, Donald Green and Ian Shapiro, published a book, *Pathologies of Rational Choice Theory*, which made it far harder for rational choice theorists to sustain this defence. On the basis of a lengthy review of existing research, they argued that the rational choice emperor had no empirical clothes:

To date, a large proportion of the theoretical conjectures of rational choice theorists have not been tested empirically. Those tests that have been undertaken have either failed on their own terms or garnered theoretical support for propositions that, on reflection, can only be characterised as banal: they do little more than restate existing knowledge in rational choice terminology. (Green and Shapiro, 1994: 6)

Green and Shapiro's book sparked a still ongoing argument about the value of rational choice theory. Although it would be a mistake to see rational choice as necessarily having come off worse from this encounter, Green and Shapiro undoubtedly forced theorists to adopt a

Box 1.4 Bounded rationality

Economists and rational choice theorists tend to assume not only that people are rational but that they are perfectly rational; that they make faultless calculations about the best means to achieve particular ends. Herbert Simon argues that people are '*intendently* rational but only *limitedly* so'. People are 'boundedly rational agents [who] experience limits in formulating and solving complex problems and in processing (receiving, storing, retrieving, transmitting) information'. According to Simon (1983: 22) 'there is now a tremendous weight of evidence that this theory describes the way people, in fact, make decisions and solve problems'.

People are boundedly rational in three particular senses. (1) They are not comprehensive decision-makers. They tend to take decisions in isolation from each other without considering the full consequences any one decision might have on other choices they may subsequently face. (2) People do not consider the full range of possible choices. (3) People do not consider all the possible consequences of any one choice. They instead focus upon just a handful of the most prominent and apparently important aspects of any choice. This notion of bounded rationality is closely linked to and is manifested in what Simon (1957) calls 'satisficing' behaviour. Because people are not perfectly rational they do not and cannot attempt to 'maximize' their utility. They instead 'satisfice' in the sense that they take decisions that seems likely to achieve some basic level of utility.

Drawing on and developing the notion of bounded rationality, Amos Tversky and Daniel Kahneman (1980, 1982, 2000) identify a number of what might be described as pathologies of human decision-making. (1) *Loss-aversion*. People strongly prefer avoiding losses to

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more defensive position. Proponents began to argue that rational choice, although flawed, was nevertheless better than anything else on offer. In his response to Green and Shapiro, Kenneth Shepsle (1996: 217), the George Markham Professor of Government at Harvard University, for example, invoked what he called the first law of wing-walking: 'don't let go until you have something else to hold on to'. Shepsle was making a perfectly valid methodological point. The value of any one theory can only be judged relative to its competitors. But the first law of wing-walking sets a very modest tone.

At first the argument ignited by Green and Shapiro remained a relatively low-key affair conducted in the pages of academic journals. In October 2000 this changed when an anonymous correspondent, Mr Perestroika, widely believed to be a graduate student in political science, circulated a 'flame-mail' denouncing the subservience of the

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acquiring additional gains. (2) *Anchoring*. When asked to make a decision or perform a calculation, people rely upon suggested reference points or 'anchors'. When asked to guess the proportion of African countries within the United Nations, those who were, for example, asked whether the proportion was more or less than 45 per cent gave a significantly lower estimate than those asked whether the proportion was more or less than 65 per cent. (3) *Availability*. People estimate the probability of an outcome based on how easy it is to imagine that outcome occurring. As a result, people tend to overestimate the probability of extremely unlikely events. (4) *Representative heuristics*. People tend to judge things as being similar on the basis of how closely they resemble each other in terms of a limited number of salient but often superficial qualities. (5) *Framing*. People's answers to particular questions will depend upon how the question is 'framed'. People's opinions about whether, for example, abortion ought to be allowed will depend upon whether a question is framed in terms of a right to life or a woman's right to choose (see Kinder and Sanders, 1990, Nelson and Kinder, 1996).

Now it might be argued that research of this sort generates an 'illusion engendered by the fact that these psychologists are trying to produce situations that provoke irrational responses – inducing pathology in a system by putting strain on it' (Dennett, 2002: 52). The assumption of rationality might be argued, on this basis, to be a perfectly reasonable approximation in most situations. Where it is not, it might also be argued that economists can usually account for any apparent lapses from perfect rationality by viewing the collection and processing of information as a cost instrumentally rational actors will economize on. Yet bounded rationality nevertheless clearly poses a challenge to standard conceptions of instrumental rationality.

American Political Studies Association (APSA) and its journal the *American Political Science Review* (APSR) to rational choice theory. The original e-mail is worth quoting at some length:

Why does a 'coterie' of faculty dominate and control APSA and the editorial board of APSR – I scratch your back, you scratch mine. I give an award to your student from Harvard and you give mine from Duke or Colombia. In short why do the 'East Coast Brahmins' control APSA?

Why are a few men who make poor games-theorists and cannot for the life-of-me compete with a third grade Economics graduate student . . . WHY are these men allowed to represent the diversity of methodologies and areas of the world that APSA 'purports' to represent?

Why are all the articles of APSA from the same methodology – statistics or game theory – with a ‘symbolic’ article in political theory . . . where is political history, international history, political sociology, interpretive methodology, constructivists, area studies, critical history, and last but not least post-modernism?

At the time when free market models of economics are being challenged in [the] IMF and World Bank, discredited in much of Asia, and protested by numerous groups; why are simple, baby stuff models of political science being propagated in our discipline. If these pseudo-economists know their maths so well let them present at the University of Chicago’s Economics workshop – I assure you every single political science article will be trashed and thrown in the dustbin . . . we are in the business of political science and not failed economics.

Mr Perestroika’s e-mail hit a chord. By January 2001 a petition demanding reforms to APSA and greater methodological pluralism had been signed by around 200 American political scientists. Following a series of newspaper articles on the subject, a notable perestroika-sympathiser, Theda Skocpol, was subsequently appointed APSA President. Indeed the backlash against rational choice eventually spread back into economics itself with students at Harvard, Cambridge and the Sorbonne petitioning their universities to reform the way in which undergraduate economics is taught and, in doing so, to consider objections to the use of deductive models and the assumption of rationality (see www.paecon.net).

Where are we today? Rational choice has not swallowed political science whole. Dennis Mueller’s prediction that it would soon do so now seems to serve only as a somewhat ironic reminder of how, *pace* Green and Shapiro, rational choice theorists sometimes struggle to make accurate predictions. But neither has rational choice disappeared. It may no longer have quite the aura of omnipotence it had acquired a few decades ago but rational choice still retains a large number of adherents and continues to shape much of the political science research agenda. A large number of the articles published in journals like the *American Political Science Review*, the *British Journal of Political Science* and the *American Journal of Political Science* continue to use rational choice theory. In some respects, Green and Shapiro’s broadside might however have encouraged some rational choice theorists to temper their methodological zeal and build bridges to other areas of

political science. Two particular areas of recent research activity are, in this respect, worth drawing particular attention to.

The first of these is rational choice 'institutionalism'. As Robert Goodin and Hans-Dieter Klingemann (1996: 11–13) observe in a recent review essay on the state of the discipline, political scientists of all shapes and sizes have, in recent years, sought to show the way in which institutions – defined as formal and informal rules, monitoring and enforcement mechanisms – constrain and guide individual action. This initially resulted in the emergence of three distinct brands of institutionalism (Lowndes, 1996; Peters, 1999). 'Historical' institutionalists emphasized the way in which individual action is constrained by preexisting rules, procedures and beliefs. 'Sociological' institutionalists emphasized the way in which individual action is constrained by cultural frames, schemas and routines. 'Rational choice' institutionalists emphasized not only the way in which individual action is constrained by systems of constitutions and property rights, but the way in which these institutions can themselves be understood as having been constructed by self-interested actors (see Campbell, 2004: 1–30 for a more detailed review). To this extent, the emergence of the so-called 'new' institutionalism at first left rational choice theorists talking about the same kinds of things as other political scientists but talking about them in a different way. Yet, from this starting-point, observers have called for and, in recent years, discerned the emergence of a 'second movement' in institutional analysis in which attempts have been made to transcend the differences between these approaches (Campbell, 2004: 183–5; Immergut, 1998; North, 1998). As a result, sociological and historical institutionalists are now more willing to acknowledge the role of self-interest in institutional design and rational choice institutionalists have started to explore the ways in which institutions not only constrain choices but 'shape' preferences.

The second is analytical narratives. Rational choice institutionalists have traditionally engaged themselves with often very general questions about institutional development and change. The contributors to *Analytical Narratives* (Bates *et al.*, 1998) instead focus upon the emergence and operation of quite specific and historically situated institutions such as the twelfth-century Genovese *poderista*, a ruler with no military power (Greif, 1998), and the International Coffee Agreement (Bates, 1998). Rather than relying upon necessarily 'stylized' accounts of actors' interests, proponents of this method utilize detailed accounts of individuals' beliefs and desires. To this extent, these authors are employing a method that would be entirely familiar to, for example,

Box 1.5 Equilibrium and explanation

The concept of equilibrium is a crucial one within rational choice theory, and I will discuss the nature and limitations of equilibrium analysis at subsequent points in this book. The following comments should therefore be regarded as introductory in nature.

An equilibrium is a stable outcome. Natural scientists conceive of equilibrium as arising when physical forces interact in such a way that a process is either endlessly repeated, as is the case with the movement of the planets around the sun, or comes to a rest, as is the case when a cup of tea eventually cools to room temperature. Economists and rational choice theorists conceive of equilibrium as arising when individuals interact in such a way that no individual has any reason to change their actions. Assume the French government abolishes the legal requirement for drivers to drive on the right-hand side of the road. Would this make any difference to peoples' actions? The simple answer is that it would probably not. Because once people have learnt to drive on the right and expect others to drive on the right then driving on the right is a stable equilibrium because it is in nobody's interests to unilaterally start driving on the left (Elster, 1989: 102).

Rational choice models typically result in the claim either that some outcome is a unique equilibrium or, more frequently, that there are multiple equilibria. Rational choice theorists search for and rely upon the notion of equilibrium because the identification of some outcome as equilibrium provides them with an explanation of why that outcome might be expected to arise:

Equilibria are valuable, indeed essential, in social science theory because they are the identified consequences of decisions that are necessary and sufficient to bring them about. An explanation is . . . the assurance that an outcome must be the way it is because of antecedent conditions. This is precisely what equilibrium provides. (Riker, 1990: 175)

There is, however, a danger here. Equilibrium is so useful a concept there must be a suspicion that rational choice theorists have searched too hard for their existence, overemphasized their stability, and underplayed the obstacles to their realization. 'Austrian' economists argue that rather than simply assume the existence of an equilibrium, as neo-classical economists are want to do, economists ought to examine more carefully the way in which (and whether) market processes push the economy towards or away from equilibrium (Kirzner, 1985, 1992). Equilibrium should, in other words, be the end rather than starting-point of analysis. In the same way it may be argued that rational choice theorists need to do more to establish not only whether a unique equilibrium exists, but whether it will be attained and, if there are several possible equilibria, which (if any) of them will be attained and why.

historians and area-study specialists. Yet their arguments are given explanatory bite by the way in which they use game theory to identify ways in which strategic interaction between actors generates often unanticipated but nevertheless stable equilibrium outcomes (Box 1.5). To this extent, one of the advantages of analytical narratives is

the possibility of assessing the argument according to rigorous, and often, formal logic. Conclusions must follow from the premises. If the reasoning is wrong or even insufficiently precise, then the account lacks credibility. Logical consistency disciplines both the causal chain and the narrative. (Levi, 2004: 216)

Yet welcome as these developments perhaps are, it would be a mistake to regard rational choice theory as having now achieved a rapprochement with the rest of political science. For in other ways, the effect of Green and Shapiro's argument has been to simply encourage rational choice theorists to apply their distinctive methods more rigorously. A glance at recent editions of the *American Political Science Review* shows that rational choice theorists are now, if anything, more likely to construct and test formal models of political processes in which it is assumed that actors are entirely rational and exclusively self-interested. To this extent, rational choice continues to polarize the political science community. At its most extreme, there are, today, political science departments which would almost certainly not appoint a rational choice theorist to their staff and, in America, departments in which it is alleged that only rational choice theorists are appointed (Blecher, 2004). Proponents and opponents of rational choice theory rarely attend the same conferences and do not usually read the same journals.

Because it risks leaving students with an unfortunate choice between textbook eulogies and poison-pen denouncements, this polarization does not make rational choice an easy subject to come to grips with. In what follows here, it is my intention to strike a more balanced approach. I will argue that rational choice offers interesting and sometimes persuasive explanations of political outcomes and events from which political scientists with little or no prior knowledge of or interest in rational choice theory can learn. But at the same time I will conclude that rational choice theorists need to do more to ensure that theirs is a 'problem' rather than 'method-driven' approach and, in doing so, that they need to acknowledge not only the strengths but the limitations of their assumptions (Shapiro, 2005).

Chapter 2

Anthony Downs and the Spatial Theory of Party Competition

Overview: In this chapter I examine the behaviour of political parties in two-party representative democracies such as the United States and the United Kingdom. The central question to be addressed is the following: In what circumstances will competition force parties to converge upon the electoral centre-ground? The initial answer to this question is provided by Anthony Downs's (1957) *An Economic Theory of Democracy*. Within political science the argument that parties will move to the electoral centre in an effort to maximize their vote has acquired the formal title of the median voter theorem. It is a theorem routinely linked to Downs; when textbooks offer an account of the median voter theorem, it is Downs's name that appears in the first paragraph; and when theorists provide criticisms of and alternatives to the theorem it is Downs's name that appears in the first footnote. I shall set out the basic terms of Downs's argument and identify its intellectual precursors. Downs's argument rests upon a particular set of assumptions. Alternatives to these assumptions and explanations as to why parties might sometimes retain distinctive policy positions are explored. This exercise takes up the single largest part of the chapter and offers an introduction to more recent rational choice scholarship. In terms of the broader political science context, I start by looking at the way in which our understanding of democracy has changed over the last few centuries, and shall conclude the chapter by contrasting accounts of democratic legitimacy developed by political theorists with the model of democracy analysed by Downs.

Setting the stage: the demands of democracy

We are used to describing as democratic regimes in which decisions are taken by elected representatives (Pitkin, 1967). Yet at the time of its inception following the English, French and American revolutions, the founders of what we now call representative democracy presented their

preferred method of decision-making as an alternative to, rather than as a particular form of democracy (Manin, 1997; Dupuis-Deri, 2004). At that time democracy was equated with direct democracy and direct democracy with anarchy. Ordinary citizens would, it was argued, be too easily swayed by populist rhetoric. For proponents like James Madison, one of the authors of the *Federalist* (1751–1836), representation would

refine and enlarge the public views by passing them through the medium of a chosen body of citizens, whose wisdom may best discern the true interest of their country and whose patriotism and love of justice will be least likely to sacrifice it to temporary or partial interests. (*Federalist*, 10)

Although this distinction between republicanism, as it was known, and democracy lives on in the names of America's two largest political parties, it has, in other respects, been largely forgotten. We tend nowadays to judge the credentials of a democratic system, representative or not, in terms of the tightness of the fit it provides between public opinion and policy outputs. The idea that representation is to be favoured because it loosens this fit seems increasingly alien.

It was in the later part of the nineteenth and early part of the twentieth century that theorists first began to argue that the practice of representative democracy was flawed because elected agents did *not* pursue the interests of their voting principals. Marxists argued that representative or bourgeois democracy was a sham and that policy outputs reflected the interests of business. Elitists like Pareto suggested that 'we need not linger on the fiction of "popular representation" – poppycock grinds no flour' (quoted Duneavy and O'Leary, 1987: 140). In the interwar years such arguments contributed to a more general loss of faith in democracy and to the rise of parties openly extolling alternatives to it. In the immediate postwar years, the academic task of defending democracy's credentials initially fell to pluralists like David Truman (1951) and John Kenneth Galbraith (1953). Against Marxists and elitists alike they argued that ordinary citizens could and did influence government policy but that they did so primarily through their membership of pressure-groups. Policy outputs, they argued, broadly reflected the inputs of competing pressure-groups and because pressure-group membership was broadly representative of public opinion, this meant that policy-making could be described as being democratic. Pluralists

accepted that some groups, most notably business groups, would dominate policy-making in particular sectors. But they denied either that the state was structurally predisposed to favour business interests or that business held a dominant position in every policy sector. But notice what is missing from this account: elections. Pluralists did not altogether ignore elections. The single most influential pluralist, Robert Dahl (1956: 131), argued that the prospect of having to fight elections forced political leaders to anticipate and so respond to public opinion. But pluralists tended not to dwell very long on elections. With the publication of *An Economic Theory*, this was to change.

The precursors of party competition

Downs's argument can be approached and best understood in terms of two earlier pieces of work. The first is Joseph Schumpeter's (1942) *Capitalism, Socialism and Democracy*. Schumpeter [1883–1950] was an economist who, shortly before presiding over a period of disastrous hyper-inflation as Austria's Finance Minister, proclaimed himself to be the greatest horseman in Austria, the greatest lover in Europe and the greatest economist in the world. Most of Schumpeter's work revolved around the subjects of economic development, entrepreneurship and the business cycle. But his writing on democracy, although amounting to no more than a couple of thousand words, has proven to be his most lasting contribution to the social sciences.

Schumpeter is usually regarded as an elitist and certainly an unambiguous elitism underpins one of his most famous arguments that public opinion is ill-informed, fickle and easily manipulated. The notion of there being a settled and reasonable public will which it is the duty of politicians to discern and respect is, Schumpeter argues, nonsense. The popular will is 'the product and not the motive power for the political process' (1942: 263). Elitists like Pareto, Michels and Mosca, who made a number of similar observations, thereby concluded that representative democracy was a sham. Schumpeter did not. Democracy was that 'arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people's vote' (Schumpeter, 1942: 269). Parties have to compete with each other to get elected, and competition forces them to select policies they believe voters will find attractive. Downs (1995: 197) credits Schumpeter with providing

'the inspiration and foundation for my entire thesis' and is, in particular, much taken with Schumpeter's argument that policy emerges as the by-product of the competitive struggle for votes. But whilst Schumpeter waxes lyrical about the nature and meaning of democracy he is remarkably vague about the tactics parties will adopt in order to get elected. Using a military metaphor he at one point suggests that parties will fight to gain control of 'hills' that afford them 'strategic advantage'. But it was another and very different metaphor which Downs eventually employed to analyse party competition.

The use of left and right as general analytical contrasts is long-standing. In the Pythagorean table of opposites, left is associated with darkness and evil and right with light and goodness (Lloyd, 1962). Yet as a term of political description the origins of the spatial metaphor are more recent. At the very start of the French Revolution delegates to the Estates-General broke away to form a National Assembly. Because voting within this Assembly was conducted by physically standing at required moments, representatives started to sit themselves next to like-minded colleagues on, literally, the left and right-hand sides of the Assembly floor. Because Assembly rules prevented representatives from describing each other as belonging to named political factions such as the Girondists, left and right were soon being used as terms of description and abuse.

Out of this simple and exclusive contrast between left and right there soon developed a conception of political space as a continuum with a centre, centre-left, centre-right and so on (Hindmoor, 2004: 3–4). Within a few months, Mounier, for example, emerged as the leader of a faction sitting at the physical centre of the Assembly and advocating a kind of English constitutionalism as an alternative to both the absolute monarchism of those on the right and the republicanism of those on the left. Propelled first by the Revolutionary and then Napoleonic wars, the use of the spatial metaphor spread first to Scandinavia and the low countries, then to Southern Europe, and, eventually, to Britain. By the start of the twentieth century the spatial metaphor offered voters, politicians and commentators a kind of political Esperanto, a universal language of politics which could be used to describe political processes and outcomes in seemingly very different countries.

The first attempt to understand political competition in spatial terms is generally credited to another economist, Harold Hotelling. The question Hotelling addressed himself to, might, initially, seem

incredibly obscure. Imagine there is a one-dimensional space, perhaps the 'main street' of a town, across which customers are equally arranged (Hotelling, 1929: 46). Where will two profit-maximizing shops locate? Most people's intuition is that one will locate to the left-of-centre and the other to the right so minimizing the average distance customers have to travel to the nearest shop. But Hotelling shows that this is not so. Each shop will actually move to the centre of the street. For it is only then that each will be able to prevent its rival from gaining a larger share of the market. Consider, for example, the position of a shop which moves to the left of the centre. Its rival could locate immediately to its right and in doing so acquire the business of the majority of those customers who live to the right. The crucial point in Hotelling's argument then comes at the very end of the article. Extending his discussion from economics to politics he suggests that

so general is this tendency [to converge upon the centre] that it appears in the most diverse fields of competitive activity, even quite apart from what is called economic life. In politics, it is strikingly exemplified. The competition for voters between the Republican and Democratic parties does not lead to a clear drawing of issues, an adoption of two strikingly contrasted positions between which the voter may choose. Instead each party strives to make its platform as much like the other's as possible. (Hotelling, 1929: 54)

Hotelling did not actually use the terms left and right to describe the position of parties in political space, did not seek to represent the position of parties using a linear scale and did not use the nomenclature of the median voter. Nevertheless, it is his spatial analysis which Downs (1957: 115) sees himself as 'borrowing and elaborating' upon. Political parties will, as Schumpeter suggests, compete to attract the support of voters. This competition, as Hotelling argues, pushes the parties toward the centre-ground.

The median voter theorem

Stated more formally, the median voter theorem rests upon the set of assumptions listed below. Whilst these all obviously call for elaboration and perhaps qualification, I want, for the moment, to concentrate on their implications.

- 1 There are only two parties.
- 2 Political space is one-dimensional.
- 3 Parties can move to and occupy any point in this one-dimensional space.
- 4 Parties are vote-maximizers.
- 5 Voters, if they vote (see Box 2.1), vote for the party closest to them in political space.
- 6 There is perfect information.
- 7 Voters' preferences are fixed.

In Figure 2.1 the horizontal axis shows a series of positions in political space running from left to right. Voters' preferences can be mapped on to this one-dimensional scale (assumption 2) and are fixed (assumption 7). The vertical axis shows support for these alternative positions. In Figure 2.1(a) the aggregate distribution of preferences shows a situation in which most voters are clustered at or near the centre of the horizontal axis and in which there are relatively few voters on the far-left or far-right. As it happens, surveys have shown this is pretty much the kind of distribution routinely found in Britain and America. Figure 2.1(b), on the other hand, shows a very different distribution in which there are a large number of left-wing voters, very few voters at the centre and a cluster of voters at the far-right. The important point to note here is that *whatever* the distribution of voters, there will always be a median voter, a person whose preferences are such that there are exactly as many voters to their right as to their left. In Figure 2.1(a) the median voter is located at the very centre of the horizontal axis, whilst in Figure 2.1(b) the median voter is located further to the left.

For the same reason Hotelling argued that competition forces businesses to locate at the centre of a street, the median voter theorem holds that competition forces parties to move to the position of the median voter. We know that there are only two parties (assumption 1) and that these parties will seek to maximize their vote (assumption 4). Consider now what would happen if party A were, in Figure 2.1(a), to locate to the left of the median voter at A'. We know that the second party, B, can move anywhere in political space (assumption 3) and that it knows the distribution of voters' preferences (assumption 6). If it were to move immediately to the right of A', to B', it would attract the votes of the majority of voters to its right (by virtue of assumption 5). So B would win the election. This would give A an incentive to move immediately to the right of B so regaining majority support. But B could then move

Box 2.1 The paradox of not voting

Voting is a costly activity. 'It takes time to register, to discover what parties are running, to deliberate, to go to the polls, and to mark the ballot' (Downs, 1957: 266). The existence of these costs is significant because whilst it may matter a great deal to people whether or not their preferred party is elected, rational actors will realize that the chances of *their* vote making any difference to the eventual outcome are incredibly low: lower indeed than their chances of being knocked down by a car whilst crossing the road to get to the polling station (Meehl, 1977). Now, as Downs (1957: 266) and, more recently, Bernard Grofman (1993) have observed, the existence of such costs gives rational choice theorists the opportunity to explain why turnout increases when the costs of voting are lower either because the weather is sunny, the polls are open longer or postal voting is possible. But there is an obvious problem here. In any reasonably-sized electorate the chances of any one person's vote making a difference to the result are so small that the costs of voting are almost certainly going to exceed the possible discounted benefits of doing so. This means that for most people it is simply irrational to vote. But of course millions of people do vote. This is the 'paradox of not voting' or, as it is sometimes called, the 'paradox that ate rational choice' (Fiorina, 1989).

So why do people vote? Possible answers include the following. (1) People vote because they value democracy and recognize that democracy will collapse if nobody votes (Downs, 1957: 267–8). But this is hardly an

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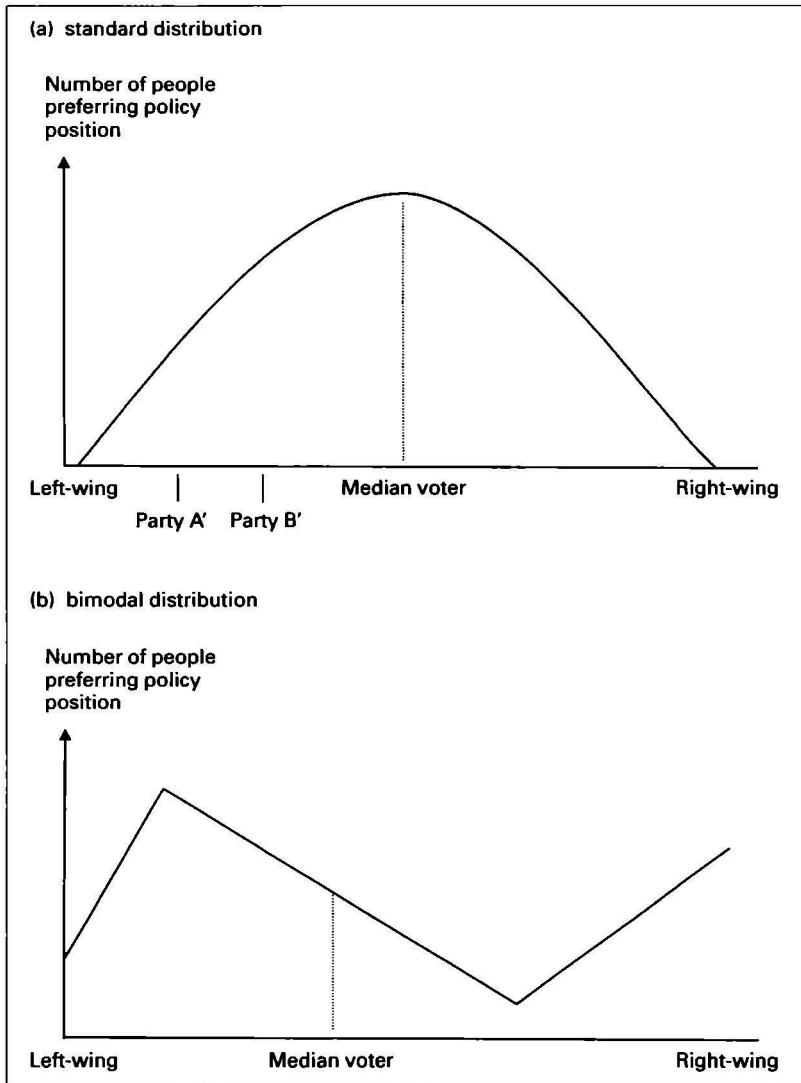
to the right of A and so on. This process of competitive 'leapfrogging' would, however, come to an end when both parties straddled the position of the median voter, for neither would then be able to increase its share of the vote by moving to either the left or right. Convergence upon the position of the median voter is in this way a stable equilibrium.

Political commentators in America and Britain have frequently remarked upon the electoral significance of the centre-ground. In 1992 Bill Clinton's unexpected victory over George Bush Senior was credited to his success in shifting the Democrats towards the centre-ground. Four years later Clinton secured an equally unexpected re-election by pursuing a strategy of 'triangulation' (Morris, 1996). By portraying a Republican Party then led by Newt Gingrich as hopelessly right-wing whilst tacitly accepting the excesses of his own party, Clinton positioned himself between whilst also rising above

→ answer because, as Downs (1957: 270) himself recognizes, voters will 'actually get this reward [of living in a democracy] even if [they] do not vote as long as a sufficient number of other citizens do'. (2) Voters are risk-averse and are driven to the polls by the fear of not voting and then seeing their preferred candidate lose by one vote (Ferejohn and Fiorina, 1974). Yet if people are so risk-averse why would they ever leave their house (Beck, 1975)? (3) Voters are driven to the polls out of a sense of duty, out of a sense that they ought to vote (Riker and Ordeshook, 1968). But if people are prepared to eschew self-interested calculations here, why assume that in other areas of their economic and political life they act in a purely instrumental and self-interested manner? (4) People vote 'expressively' to demonstrate (to themselves and others) their support for a particular candidate (Brennan and Lomasky, 1993). (5) People vote because they think that other people will calculate that it is not rational to vote and that *their* vote *will* therefore be decisive (see Mueller, 1989: 351–2). But would rational people really think it likely that nobody would vote when millions of people have consistently done so in previous elections? (6) People vote because the costs of voting are extremely low, and below some threshold people do not bother to calculate whether the costs of low-cost activities are greater than their benefits (Barry, 1978: 23). To put the same point in a slightly different way, people vote because they 'satisfice' and the costs of voting are so small that people do not bother to adjust their behaviour to maximize their returns (Bendor *et al.*, 2003). (7) People vote because they want to demonstrate to others that they can be trusted to behave in a non-selfish manner (Overbye, 1995).

the available alternatives. A few months later New Labour in the UK won an election landslide by erecting, in the words of a *Sunday Times* (1997) editorial, a 'razor wire' fence around the centre. According to one of Tony Blair's biographers, John Rentoul (2001: 197), it was as a visitor to the Democrat's 1992 campaign that he, Blair, had learnt the 'important lesson that all politics is a battle for the centre-ground'. Precisely because the electoral significance of the centre-ground is and always has been so widely recognized, it is open to critics to argue that the median voter theorem is 'banal' (Green and Shapiro, 1994: 6). But Downs is not simply arguing, as political journalists routinely argue, that parties can gain an advantage by moving to the centre. Downs can be understood as attempting to specify the reasons why and the necessary and sufficient conditions in which parties find it in their interests to converge upon the centre-ground.

Figure 2.1 *Two-party competition with standard and bimodal distributions*



Qualifying the argument: accounting for divergence

Critics routinely argue that rational choice models have little or no explanatory value because they are constructed from a series of

implausibly heroic assumptions, most notably that individuals are rational. One possible defence against this argument is the instrumentalist one that theories ought to be judged in terms of the accuracy of their predictions rather than the realism of their assumptions (see Box 8.3). To this end, we might re-cast the median voter theorem as a prediction about the way in which parties will behave. As Colin Hay (1999) observes, there is plenty of evidence that the members and leaders of political parties in Britain and America believe that something like the median voter theorem holds. Members often choose party leaders on the basis of judgements about which candidate will prove most appealing to the wider electorate; newly elected leaders routinely talk about the need to appeal to voters at the centre-ground and berate activists who want to return the party to its ideological roots; and party leaders use opinion polls and focus groups to road-test policies. Politicians' faith in the veracity of the median voter theorem is not without foundation. There is plenty of evidence that parties can usually increase their share of the vote by moving closer to the position of the median voter (see, for example, Sanders, 1999).

The problem here is, however, that the theorem does not simply predict that parties will converge *towards* the position of the median voter. It predicts that parties will move *to* the position of the median voter and so adopt *identical* policy positions. Now parties do sometimes signal a change in position by adopting some of their opponents' policies. In the early 1990s, for example, New Labour in Britain moved itself to the right by embracing Conservative spending plans and promising to leave income tax unchanged and the basic terms of trade union legislation in place. In a similar way, the Australian Labor Party undercut its Liberal opposition in the 1980s by embracing free trade, privatization and financial deregulation (Jaensch, 1989). But no matter how intent upon outflanking their opponents they are, parties do *not* simply adopt other parties' policies wholesale. Detailed surveys of manifesto commitments (Budge, 1999) and policy outputs (Chappell and Keech, 1986) show that political parties retain distinctive characteristics. Left-wing parties tend, for example, to pursue more expansionary monetary policies, run-up larger budget deficits, spend more on welfare and preside over falling unemployment. Conversely, right-wing parties tend to pursue more restrictive monetary policies, cut budget deficits, spend more on defence and preside over falling inflation (see Mueller, 2003: 447–50 for a review of the evidence).

Instrumentalists maintain that theories ought to be judged in terms of the accuracy of their predictions rather than the realism of their assumptions. Yet the obvious rejoinder to this is that bad assumptions lead to poor predictions. Given that political parties do not converge upon the position of the median voter and adopt identical policy positions, do we therefore need to abandon Downs' assumptions in order to understand the process of party competition? In some ways I think the simple answer to this question is that we do. But this does not mean that Downs' theory is a poor starting-point for a discussion of party competition. The assumptions employed by Downs are valuable not necessarily because they are accurate, they are often not, but because they serve as explanatory prompts which we can use to account for the behaviour of actual parties. Down's model of party competition specifies the necessary and sufficient conditions in which parties will find it in their interests to converge upon the position of the median voter. Having identified these conditions we can therefore start to explain why parties in the 'real world' do not always converge upon the position of the median voter in terms of variations in these conditions. Over the following pages I will look at and consider the plausibility of each of the assumptions Downs makes and show how alternative assumptions can be used to account for policy divergence.

Assumption 1: there are only two parties

In a now classic study of the impact of voting systems upon the number of parties, Maurice Duverger (1951) first formulated what has since become known as 'Duverger's Law' and 'Duverger's Hypothesis' (Riker, 1982b). Duverger's Law holds that plurality (or first-past-the-post) voting systems tend to lead to two-party competition. Duverger's hypothesis holds that proportional voting systems tend to be associated with multi-party competition. This argument rests upon the identification of 'mechanical' and 'psychological' effects associated with the use of plurality systems. The mechanical effect refers to the way in which plurality systems discriminate against third parties or candidates whose vote is evenly divided across a number of constituencies. In the 1992 and 1996 US Presidential elections, for example, Ross Perot acquired 19 and 9 per cent of the national vote respectively. Yet because he came in third in most states, Perot did not acquire a single vote in the Electoral College. The

psychological effect refers to the tendency of voters, knowing that third parties are discriminated against in this way, to avoid 'wasting their vote'.

Does Duverger's Law hold? The answer to this question depends upon the way in which the number of parties in any one country is counted, and there are a number of possibilities here. At one extreme we could count any party which put forward any candidate in any election. In this case there would be no two-party systems. Indeed judging by the number of parties officially registered with, for example, the British Electoral Commission, Britain would be a 278-party system with the 'No Candidate Deserves My Vote Party' led by Amanda Ringwood of St Albans counting equally with the Conservatives and Labour. At the other extreme, and following the suggestion of Giovanni Sartoria (1976), we might only count a party if it has a realistic chance of governing alone. But realistic is a term obviously open to interpretation and this method would have the unfortunate consequence of rendering some stable democracies, including Britain's in the 1980s, as one-party states. The compromise suggested by Rein Taagepera and Matthew Shugart (1989) is therefore to count the 'effective' number of parties (Box 2.2). Using this method, parties are counted in proportion to their size in such a way that small parties, although counted, do not count to the same extent as larger ones.

By the usual standards found within the social sciences, the evidence for the existence of Duverger's law and hypothesis is quite strong (Riker, 1982b). As Table 2.1 shows for the case of both votes cast and seats taken, the effective number of parties in plurality voting systems is significantly lower than it is in proportional voting systems. This is not necessarily to say that Duverger is beyond reproach. For it may be that countries in which there is only one salient political cleavage, and which therefore naturally lend themselves to two-party competition, choose plurality voting systems for this reason. Conversely, it may be that countries with multiple cleavages – socio-economic, religious, linguistic and territorial – which naturally lend themselves to multi-party competition choose proportional voting systems. The number of parties in a country may, in other words, cause the voting system rather than the voting system causing the number of parties (Bogdanor, 1984; Colomer, 2005). But we do not need to resolve this issue here. What matters is that Downs's assumption of two-party competition is, in those countries using the plurality voting system, a reasonably plausible one.

Box 2.2 The effective number of parties

The following account is drawn from Taagepera and Shugart (1989: 77–80). Imagine four possible party systems in each of which there are five parties attracting the following vote shares:

Party	A	B	C	D	E
System 1	51%	42%	5%	1%	1%
System 2	51%	26%	11%	11%	1%
System 3	40%	37%	11%	11%	1%
System 4	40%	37%	9%	9%	5%

Intuitively, we might describe system 1 as a two-party system. But it is far less clear how we might describe systems 2, 3 and 4. In each of these, the two largest parties, A and B, account for more than two-thirds of the total votes cast. Yet in each case the smaller parties attract some support. In order to resolve this problem we could establish a 'cut-off' point below which a party would not be 'counted'. But any such number would clearly be arbitrary. If, for example, we set this cut-off at 10% then system 3 would be a four-party system and system 4 a two-party system even though there is very little actual difference between them.

The best way of calculating the effective number of parties is to let the vote shares determine their own weights in the following manner:

- 1 Multiply the fractional share of each party against itself. So in the case of system 1, the fractional share of party A is 0.51 and $0.51 \times 0.51 = 0.2601$.
- 2 Add together the resulting figures for each party in this system: $0.2601 + 0.176 + 0.0025 + 0.0001 + 0.0001 = 0.4388$.
- 3 Divide 1 by this number = 2.278.

So restricting ourselves to 1 decimal place system 1 has 2.3 effective parties, system 2 has 2.8 effective parties, system 3 has 3.1 and D has 3.2. Note that the effective number of parties can be calculated in terms of the votes cast (as it is here) or in terms of the number of seats each party holds within the legislature following the election.

Assumption 2: political space is one-dimensional

Downs (1957: 115) assumes that 'political preferences can be ordered from left to right'. Some social scientists (Giddens, 1994) and occasional politicians (Blair, 1997) have argued that, in a post-industrial,

Table 2.1 *The effective number of parties*

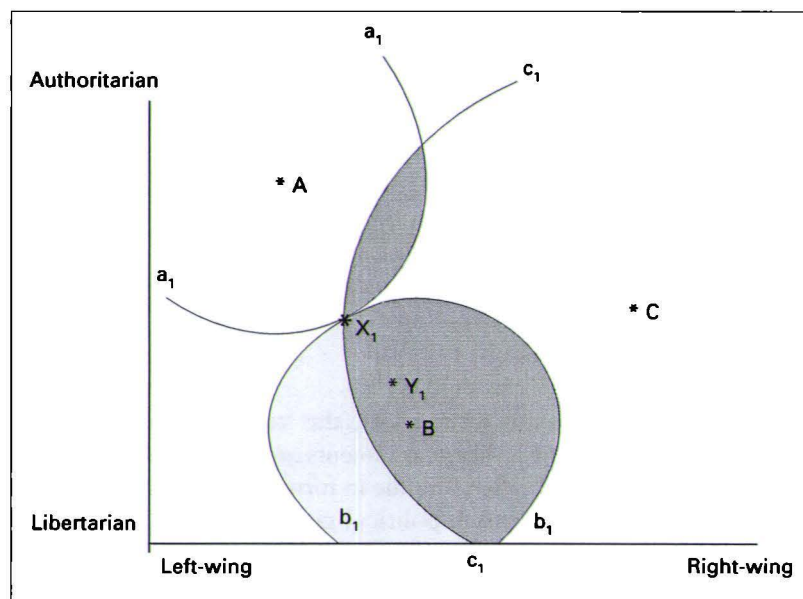
<i>Country</i>	<i>Year</i>	<i>Effective number of parties by vote</i>	<i>Effective number of parties by seats</i>
<i>Countries using plurality voting</i>			
Bahamas	1982	2.1	1.6
Canada	1984	2.8	1.7
India	1984	3.8	1.6
Malaysia	1982	2.3	1.4
New Zealand	1984	3.0	2.0
South Africa	1981	2.6	1.5
Sri Lanka	1977	2.8	1.4
United Kingdom	1983	3.1	2.1
United States	1984	2.0	1.9
Average		2.0	1.8
<i>Countries using proportional voting</i>			
Belgium	1985	8.1	7.0
Denmark	1984	5.8	5.5
West Germany	1983	2.6	2.5
Switzerland	1983	6.0	5.3
Australia	1984	2.8	2.4
Finland	1983	5.4	5.1
Ireland	1982	2.7	2.6
Netherlands	1982	4.2	4.0
France	1981	4.0	2.8
Sweden	1985	3.5	3.4
Average		4.5	4.0
<p><i>Note:</i> An index of voting systems used in each country is available at http://www.worldpolicy.org/globalrights/prindex.html.</p> <p><i>Source:</i> Data from Taagepera and Shugart (1989: 82–3).</p>			

post-communist, post-modern society, the ‘terms left and right no longer have any relevance’. These arguments are, I think, overdone (see Bobbio, 1996). Left and right continue to form a staple part of political discourse, but it is clear that political competition in Britain and America is no longer, if it ever were, exclusively one-dimensional. Before proceeding any further we need to be clear about the terminology being

used here. Dimensions refer to policy issues over which voters or politicians have connected beliefs. Recent studies of British electoral behaviour (Heath *et al.*, 2001: 78–81) have revealed the existence of at least two and possibly three dimensions. The first and still most salient of these is the left–right dimension; the second is a libertarian–authoritarian dimension taking in such issues as racial equality, the death penalty and stiffer sentences; the third, most recent, and still weakest dimension is a British nationalist one composed of attitudes towards devolution, Northern Ireland and Britain’s nuclear deterrent.

What happens to the dynamics of party competition when there is more than one dimension? Figure 2.2 shows a situation in which there are three voters (A–C) whose preferred positions (marked as A, B and C) are mapped against a socio-economic and libertarian–authoritarian dimension. Voter A is extremely left-wing and authoritarian, voter B is moderately right-wing and libertarian, and voter C is extremely right-wing and moderately authoritarian. Assume that there are two parties, X and Y, and that X has initially located itself at point X_1 . Where could Y position itself in order to attract more votes? To answer this we need to construct a set of indifference curves (a_1a_1 , b_1b_1 , c_1c_1) intersecting

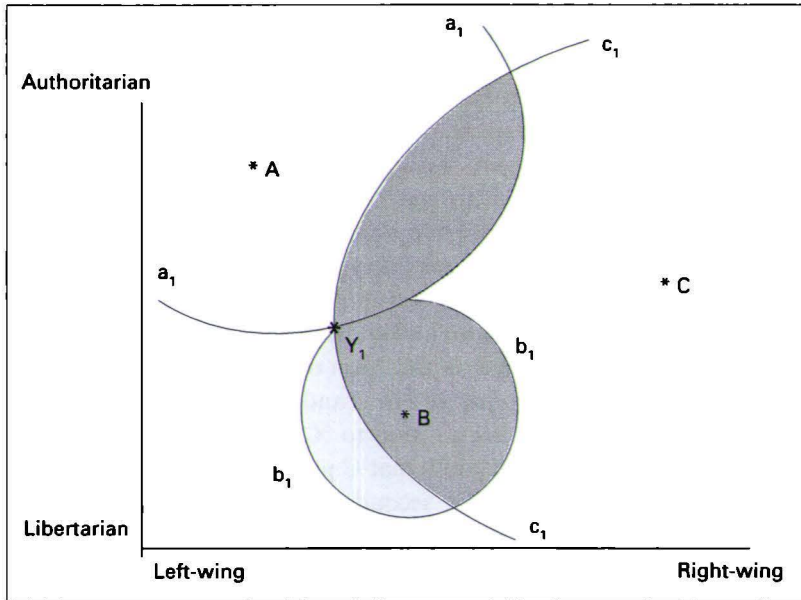
Figure 2.2 *Party competition in two dimensions (i)*



at X_1 and showing points in political space between which each voter is indifferent. Look at, for example, the semi-circle a_1a_1 . This shows a set of points between which A is indifferent. To put the same point in a different way, all the points along this line, including X_1 , are an equal distance away from A's ideal or 'bliss' point. What about all those other points in this two-dimensional space? If voters vote for the party closest to them in political space (assumption 5), A will vote for a party positioned anywhere along this line in preference to any beyond it and to the right because any such party will be closer to its bliss point. We can also say that A will prefer any party positioned at any point inside the line to any party on the line because any such party will be closer to its bliss point. The next thing to look at here is the two shaded areas or 'winsets'. The first and larger of these, on the lower right-hand side of the figure, shows those points voters C and B prefer to X_1 . We know that B prefers any point in this area to X_1 because these points are closer to its bliss point. We know that C prefers any point in this area to X_1 for the same reason. The second and smaller winset at the top shows those points voters A and C prefer to X_1 . We can now return to the question with which we started. Where could Y position itself in order to attract more votes? By moving to *anywhere* within *either* winset it could attract the support of two of the three voters.

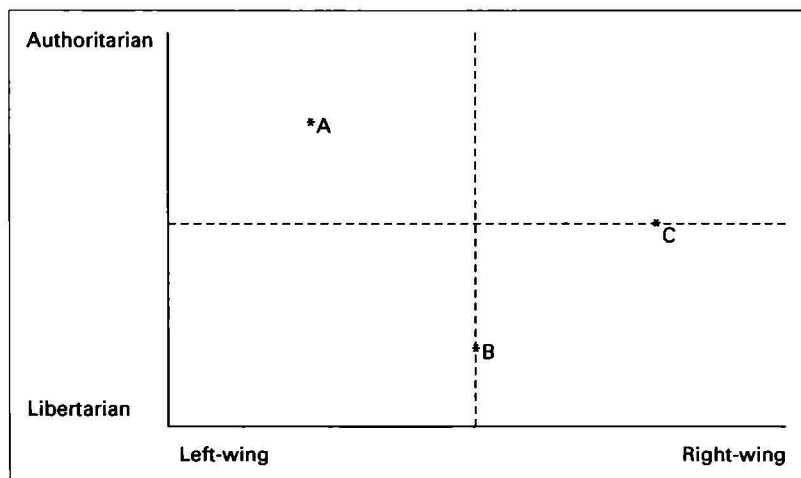
Assume that Y actually positions itself at Y_1 in Figure 2.2. Where could X now position itself to attract more votes? Figure 2.3 shows a set of indifference curves (a_1a_1 , b_1b_1 , c_1c_1) this time intersecting at Y_1 . There are, once again, two shaded winsets. The first, at the bottom of the diagram, shows those points B and C prefer to Y_1 . The second, running towards the top of the diagram, shows those points that A and C prefer to Y_1 . So X could move anywhere within these areas and attract the support of two of the three voters and so win the election. Now we could repeat this exercise indefinitely. With this particular distribution of preferences no matter where one party positions itself the other party could always attract more votes by moving to a different location.

The discovery, in the late 1960s and early 1970s, that there is usually no stable equilibrium when there are two or more dimensions came as something of a shock to rational choice theorists. Far from being inherently stable, party competition, it now appeared, was 'chaotic' (McKelvey, 1976). In recent years the argument has, however, swung back. Theorists accept that there will not usually be a stable equilibrium when there is more than one dimension, but they maintain that for most plausible distributions of preferences, parties will find it in

Figure 2.3 *Party competition in two dimensions (ii)*

their interests to adopt positions within a relatively small region known as the 'uncovered set'. What is the uncovered set? A position P_1 is said to cover position P_2 if P_1 is majority-preferred to P_2 and if all the alternatives which are majority-preferred to P_1 are also majority-preferred to P_2 . There will usually be a set of positions that P_1 does *not* cover and to which it is therefore particularly vulnerable. These positions are the uncovered set of P_1 . Assume now that the uncovered set of each and every position has been identified. By looking at the intersection of all these points (the set of points they have in common) it will be possible to identify the uncovered set for the whole policy space. Parties will find it in their interests to adopt positions within this space for two reasons. (1) The number of positions that will be majority-preferred to those within the uncovered set will usually be quite small. (2) Positions within the uncovered set will be majority-preferred to most of those positions outside of it. Whilst parties may, in the short-term, adopt positions outside of the uncovered set, in the longer term competition will usually lead parties to return to it (see Tullock, 1967; Cox, 1987; Miller, Grofman and Feld, 1989; Mueller, 2003: 236–41 for a review).

The uncovered set will often be located in and around the position of the dimension-by-dimension median. In Figures 2.2 and 2.3, the

Figure 2.4 *Dimension-by-dimension median*

median voter on the socio-economic dimension is B (A is to their left and C is to their right). The median voter on the authoritarian-libertarian dimension is C (A is more authoritarian and B is less authoritarian). Figure 2.4 shows two lines, the first intersecting point B and the second intersecting point C. The dimension-by-dimension median is the point at which these lines intersect. So the existence of multiple dimensions may not always make a significant difference to the dynamics of party competition.

Assumption 3: parties can move to and occupy any point in this one-dimensional space

The median voter theorem requires that parties can move anywhere in political space. What might prevent them from doing so? One possible answer is party activists. Downs (1957: 24–5) defines a political party as a ‘team of men seeking to control the governing apparatus by gaining office in a duly constituted election’. He then goes on to assume that ‘members agree on all their goals’ and that each party can therefore be treated as if ‘it was a single person’. But this is simply implausible. Intra-party conflict can frequently be as intense as inter-party conflict. Such conflicts arise because ordinary party members tend to have different political views from party leaders and ordinary voters

(May, 1973). That the beliefs of party members should differ from those of ordinary voters is hardly surprising; people will presumably only join the Labour or Democratic Parties if they regard themselves as being to the left of the Conservatives or Republicans. So given this self-selection filter, the median Labour or Democratic Party activist is bound to be to the left of the median voter in the country as a whole.

Such differences will not matter if party activists have little or no power and party leaders are able to move their party to the position of the median voter. Neither will it matter if activists are prepared to set aside their policy preferences in order to secure their party's election. But if neither of these conditions holds, party leaders may be unable to move to any point in political space. If the power activists have is the power to elect the party leader, vote-maximizing candidates for the party leadership may well have to adopt positions appealing to the median voter within the party rather than the median voter within the wider electorate. Candidates in left-wing parties will have to present themselves as belonging to the left whilst candidates in right-wing parties will have to present themselves as belonging to the right. This will not matter if, once elected, party leaders can steer their party back to the centre. But if voters value responsibility, such a strategy might be costly. Party leaders may find promises they made during a leadership election thrown back at them by a rival during a subsequent national election campaign. If activists have some direct control over policy-making, the opportunities for a party leader to move towards the position of the median voter may be even more limited.

Assumption 4: parties are vote-maximizers

Downs (1957: 27) maintains, rather gruesomely, that politicians, all politicians, 'act solely in order to attain the income, prestige and power which come from being in office'. Because they have no preferences over policy they 'formulate policies in order to win elections rather than win elections in order to formulate policies' (*ibid.*). Now it is certainly the case that voters have an overwhelmingly poor view of their elected representatives and to this extent Downs's assumption may ring true, but judging by the lengths they go to champion their favoured policies in internal party debates, the assumption of vote-maximizing nevertheless looks like a caricature.

As I have previously suggested, it is, with sufficient ingenuity, always possible to account for any pattern of behaviour in terms of the

assumption of self-interest. So it might be argued that politicians argue about policies because doing so allows them to, for example, publicly express their allegiance to factions within a party they believe can further their career. But it is incumbent upon social scientists not simply to find explanations which are consistent with the facts but which best explain those facts. As rational choice theorists have subsequently come to accept (Wittman, 1977; Laver and Hunt, 1992), the most plausible explanation of most politicians' behaviour is they care about both policy and votes; that they have both policy-seeking and office-seeking motives. Politicians have principles. They will not say or do anything in order to be elected, but their principles are not cast in stone. Politicians will formulate their policies with at least one eye upon the prevailing public mood. From this point it is of course easy to see how we might account for the fact that parties adopt differing policy positions in terms of their distinctive policy preferences. But such an argument obviously risks looking entirely *ad hoc*. In recent years the argument that preferences over policy can be used to explain policy divergence has, however, been given greater empirical and analytical bite through a challenge to another of Downs's assumptions.

Assumption 5: voters vote for the party closest to them in political space

Downs maintains that the position a party occupies depends solely upon the policies it has adopted and that voters only care about policies. Consequently voters will always select the party closest to them in political space. Now surveys have shown that voters are, statistically, far more likely to vote for the party closest to them in political space (for a review of the evidence see Merrill and Grofman, 1999); but they have also shown that the relationship between position and vote is an imperfect one. Voters, it would appear, care about policy but they do not only care about policy. At this point, rational choice theory rubs up against an older, behaviourist, political science tradition which emphasizes the extent to which many voters identify with and vote for parties that, in policy terms, they may not actually be closest to (see Campbell *et al.*, 1954, 1960; Butler and Stokes, 1969). Voters, it is argued, do not step back and look at the policy position of each party and then rationally choose between them. Because they are rationally ignorant they usually vote for the party they have always voted for. It would appear that the strength of such partisan identifications has waned in recent

decades. In Britain, for example, the proportion of voters who 'strongly identified' with a political party fell from around 44 per cent in the early 1960s to around 12 per cent by the late 1990s. In other words, it may be that voters are becoming more Downsian in their behaviour. But the relationship between policy position and vote nevertheless remains a probabilistic rather than deterministic one.

What difference does this make to party competition? If party leaders only care about getting elected it makes no difference. If voting is probabilistic, parties can still increase their *chances* of getting extra votes by moving towards the position of the median voter. But, as James Enelow and Melvin Hinich (1982, 1989) have shown, if candidates have both office-seeking and policy-seeking motives, parties will be more reluctant to sacrifice preferred policy positions for the uncertain prospect of acquiring more votes. Probabilistic voting sustains equilibria in which parties converge towards the median voter but do not adopt identical policy positions.

Assumption 6: there is perfect information

Parties can only move to the position of the median voter if they know where that voter is located. Equally, voters can only vote for the party closest to them if they know where the parties are located. Perfect information is the lubricant that keeps the median voter theorem running smoothly and predictably. It is therefore not difficult to see what difference a little bit of uncertainty – which Downs (1957: 77) defines as 'lack of sure knowledge about the course of past, present, future or hypothetical events' – might make. If, for example, parties disagree about where the median voter is located, they will obviously end up adopting different positions. This much seems obvious. But uncertainty also matters in a more interesting way. In committing themselves to particular policy positions, parties are making promises. They are promising, if elected, to implement one set of policies rather than another. But voters cannot know with absolute certainty whether a party intends to or will be able to fulfil its policy promises (Hinich and Munger, 1996), and for this reason in an uncertain world it matters a great deal whether voters regard a party as being trustworthy.

Downs recognizes this and suggests that competition leads parties to act reliably and responsibly. A party is reliable if 'its policy statements at the beginning of an election period – including those of its preelection

campaign – can be used to make accurate predictions of its behaviour during the [subsequent] period’ (Downs, 1957: 104–5). The easiest way for parties to acquire a reputation for acting reliably is to keep their policy promises. Because ‘rational men will vote for an unreliable opposition party only if the [alternative] parties have such abysmal proposals that random policy selection is preferable to them’ (Downs, 1957: 107), the desire to be re-elected gives parties an incentive to act reliably. What then of responsibility? A party is responsible if ‘its policies in one period are consistent with its actions (or statements) in the preceding period, i.e. if it does not repudiate its former views in formulating its new programme’ (Downs, 1957: 105). A responsible party retains faith with its policy position over a long period of time; an irresponsible party constantly changes its position. But if voters value responsibility parties may not always be able to maximize their vote by moving to the position of the median voter. Consider the position of a party which has, wittingly or unwittingly, strayed to the left of the median and so lost an election. On the one hand it can gain votes by moving to the right and toward the median voter. This much we already know. But if voters value responsibility it will risk losing votes by changing its position. What its vote-maximizing strategy will be will depend upon the precise number of votes it risks losing. But it is not hard to see why the need to appear responsible might lead parties to retain distinctive policy positions.

It is easy to see why voters might care about whether a party has a reputation for acting reliably. But what is unclear here is why they should care about whether a party has acted responsibly. Why does it matter what a party has said or done in the distant past? The best answer to this question is, I think, one which draws us back to the earlier discussion of politicians’ motives. If a party has retained its policy position over a long period, voters may infer that it has a genuine, policy-seeking, commitment to its position and that the party can, if elected, be trusted to do what it says it is going to do. If, on the other hand, a party has only recently adopted a policy position and only done so when that position became popular, voters might worry that its commitment is purely instrumental and vote-seeking and that the party might, at the first sign of trouble, renege upon its promises. This suggests a striking and seemingly paradoxical conclusion. Parties which attempt to maximize their vote by constantly changing their policies to suit the message of the latest opinion poll or focus group, might actually risk losing support. Parties which adopt policy positions because they genuinely believe in them may end up attracting more

votes. The dichotomy previously posited between vote-maximizing and policy-seeking may therefore be a false one. The attempt to vote-maximize might be self-defeating.

Assumption 7: voters' preferences are fixed

Downs (1957: 55) assumes that the preferences voters have over policy positions derive from their underlying 'fixed conceptions of the good society'. But Downs simply does not say where these conceptions come from or why they should be considered as fixed. Some voters, it would appear, are simply right-wing and others are simply left-wing. The blame here does not simply lie either with Downs or, more generally, rational choice theory. For, by and large, preference-formation remains as much of a mystery to psychologists, sociologists and historians as it does to rational choice theorists. Social scientists now know a great deal about what people want. They know far less about why they want it. At the crudest of statistical levels one thing we do, however, know is that people from similar socio-economic backgrounds are more likely to have similar political stances. From mass surveys of voting behaviour we know, for example, that people who went to state schools, have manual jobs, belong to a trade union, work in the public sector and live in council houses are more likely to regard themselves as being on the left than people who went to public schools, have professional jobs and so on.

As Patrick Dunleavy (1991) argues, knowledge of such relationships, whether simply intuitive or confirmed by polling data, gives incumbent parties the opportunity to pursue policies that will increase their vote. By giving larger tax breaks to public schools, reducing the powers and so attractiveness of trade unions, privatizing firms and selling council houses, right-wing parties can increase the number of people going to private schools, owning their own homes and so forth and, by doing so, lead some people to change their conceptions of the good society (see Stubager, 2003 for a detailed empirical analysis). The preferences voters have and, by extension, the location of the median voter is not, it must be concluded, fixed. Parties have a choice. They can either accommodate themselves to the preferences voters have or they can try to 'shape' those preferences to suit their policy preferences. Incumbent parties also have an advantage over opposition ones in that they can maximize their chances of re-election by manipulating the economy to their advantage (see Box 2.3).

Assessment

In some subsequent chapters, principally but not exclusively those on social choice theory (Chapter 4) and rent-seeking (Chapter 7), I express a number of reservations about the trajectory of rational choice theory. *An Economic Theory of Democracy* is, however, a book I believe students of politics can all learn from. In the first place, the issue the book addresses is an important one. It obviously matters a great deal whether competition leads parties to move towards or away from the median voter. In the second place, Downs's demonstration that parties will, when a particular set of circumstances hold, converge upon the position of the median voter remains a compelling one. Thirdly, and finally, Downs's argument is an attractive one because it is presented so simply. The literature on party competition *An Economic Theory* has inspired is also interesting and valuable. It is certainly the case that an increasing level of technical sophistication has made some of this material less accessible to outsiders. But technical sophistication has not become an end in itself. This remains a 'problem' rather than a 'method-driven' area of research (Shapiro, 2005). The issues theorists are continuing to address, about the dynamics of multi-dimensional competition, about the extent and impact of uncertainty and so on, retain an obvious relevance to politics in the 'real world'. In the final part of this chapter I do, however, want to briefly identify one way in which developments within the political science discipline have robbed *An Economic Theory* of at least a part of its significance.

The distinction between positive and normative, between is and ought, is a long-standing and important cornerstone of the way in which we think about the world. Within political science departments, the distinction is usually manifested in the work of political theorists, who think about the way the world ought to be, and others, public policy analysts, area specialists and comparative politics experts, who look at and try to understand the world as it is. Clearly this is a crude division. To the extent that 'ought implies can', political theorists have an obvious responsibility to consider whether their proposals are feasible (see Goodin, 1995). But in terms of the way most political scientists approach their task, the division is nevertheless a recognizable one. It is tempting to regard Downs's work and the literature on party competition it has inspired in exclusively positive terms as being about the way parties behave. In the introduction to his book Downs certainly encourages such a reading. Casting an envious eye towards the rigour

Box 2.3 Political business cycles

Political business cycle theory is associated with the claims that (i) the vote an incumbent party receives in any election depends, at least in part, upon the economy's performance at that time, and (ii) that incumbent governments can manipulate the economy in the run-up to an election in order to maximize their chances of re-election. Many if not most theorists also claim that (iii) manipulating the economy in this way causes long-term economic damage. Stated in this way, political business cycle theory is neither counter-intuitive nor startlingly original. The eighteenth-century Scottish political philosopher David Hume (1711–76) repeatedly expressed his concern that it 'would be scarcely more impudent to give a prodigal son a credit in every banker's shop in London, than to empower a statesman to draw bills, in this manner on posterity' (quoted, Hampsher-Monk, 1992: 151). Rational choice theorists have, however, been able to provide a more sophisticated analysis of the circumstances and ways in which politicians will seek to manipulate the economy.

William Nordhaus (1975) argues that there is a stable and inverse relationship between inflation and unemployment which incumbent politicians can exploit by either increasing public expenditure or reducing taxes in the run-up to an election. This generates an economic boom leading to lower unemployment and, eventually, but only once an election is over, higher inflation. Douglas Hibbs (1977, 1992) argues that political business cycles take a 'partisan' form; that left-wing parties concentrate upon reducing unemployment and that right-wing parties

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and status of general equilibrium theory within economics he writes that

little progress has been made toward a generalised yet realistic behaviour rule for a rational government similar to the rules traditionally used for rational consumers and producers. As a result, government has not been successfully integrated with private decision-makers in a general equilibrium theory . . . *this thesis is an attempt to provide such a behaviour rule for democratic government.* (Downs, 1957: 3; emphasis added)

Yet, as I argued in the introduction to this chapter, *An Economic Theory* can also be understood as offering a normative defence of representative democracy. For if what we require of democracy is a 'tightness of fit' between public opinion and policy outputs, the median voter theorem shows that competition gives parties an incentive to

→ attempt to reduce inflation. In a sustained onslaught on the assumptions and practice of Keynesian economics, James Buchanan and Richard Wagner (1977, 1978) argue that incumbent governments can, in the short term at least, appease voters by offering them both higher public expenditure *and* lower taxation through the accumulation of ever-increasing budget deficits paid by future generations of voters.

There are two problems with these models. The first is their assumption that incumbent politicians will always seek to manipulate the economy for electoral gain. If, however, an incumbent party believes that it is going to win or lose a forthcoming election come what may, it will have no incentive to try and engineer a boom (Schultz, 1995). The second problem is that these models tend to portray voters as being basically stupid and easily and repeatedly fooled by politicians. If, however, people are rational surely they should *expect* politicians to engineer a boom and if they expect them to do so why would they then reward them at the polls? In recent years theorists have sought to reconcile such 'rational expectations' with the existence of a political business cycle. Alberto Alesina (1987) and Alesina and Rosenthal (1995) argues that because voters cannot be certain which party is going to win the next election, a left-wing party government will, for a short time at least, be able to 'surprise' voters by stimulating the economy and reducing unemployment and that a right-wing party will be able to reduce inflation. There is, on this reading, a political business cycle but it is not one an incumbent politician will necessarily be able to exploit for electoral advantage.

formulate policies in order to please the voters rather than to please themselves. But since *An Economic Theory* was published, the normative argument about democracy has moved on, and two further 'waves' in democratic theory can be identified (Goodin, 2003: 3). The first, participatory democracy in the late 1960s and 1970s, regarded democratic legitimacy as requiring the maximum involvement of ordinary citizens and the extension of the sphere of democratic decision-making from the narrowly political and constitutional to the social and economic (Cook and Morgan, 1971). The second, deliberative democracy in the 1980s and 1990s, regards democratic legitimacy as requiring the resolution of disputes through reasoned discussion (Elster, 1998). In neither of these cases is legitimacy seen to depend upon the relationship between public opinion and policy outputs, and in both cases representative democracies of the sort analysed by Downs stand condemned.

For participatory democrats representative democracy is inadequate

because it reduces the involvement of most citizens to an occasional vote. For deliberative democrats representative democracy is inadequate because it leaves political disputes to be solved through voting rather than talking. For such theorists, Downs's argument that competition forces parties to converge upon the position of the median voter therefore risks looking like something of an irrelevance. Now it is of course possible that the tide will turn and that political theorists will once again start to debate the normative properties of representative democracy (see Brennan and Hamlin, 2000). But, in the meantime, if rational choice is to re-engage with political theory there is a need to develop positive theories about what happens when political actors, whether in legislatures or citizen juries, attempt to resolve disagreements through deliberation.

Chapter 3

William Riker and the Theory of Coalitions

Overview: In this chapter I examine the behaviour of parties in multi-party representative democracies such as Germany, Holland and Belgium, in which governments are routinely formed by coalitions of parties. The central question addressed is this: What kind of coalitions will emerge from the post-election negotiations between party leaders? Rational choice theorists have offered a number of answers to this question. I do not provide a general review of them here (see Laver, 1998), instead I distinguish between two broad approaches within coalition theory. The first, exemplified by William Riker's (1962) theory of the minimal winning coalition, assumes that politicians are self-interested office-seekers. The second, exemplified by Michael Laver and Kenneth Shepsle's (1996) portfolio-allocation model, assumes that politicians are policy-seekers who care, above all else, about seeing their preferred policies implemented. In examining and assessing these accounts, I show how rational choice theory has been informed by and can be used to account for the findings of other political scientists working in this area.

Setting the stage: choosing a voting system

In the previous chapter I examined the behaviour of political parties in countries using plurality or 'first-past-the-post' voting systems. Electoral competition will then usually be between two 'effective' parties one of which will acquire a legislative majority and form a government. The obvious point I want to start by emphasizing here is that the use of plurality voting systems is a matter of political choice. In Britain, the third party, the Liberal Democrats, aided by elements within the Labour Party, remain committed to the introduction of some form of proportional representation. In Canada, dissatisfaction with plurality voting led to a Law Commission report in 2004 recommending the use of a mixed member system of proportional representation. Because the only parties that either have or are likely to acquire

Box 3.1 Proportional representation and multi-party competition

In this chapter I tend to talk, rather loosely, about 'proportional' voting systems. It must, however, be emphasized that there are a number of different methods of proportional voting including open and closed 'list' systems, mixed-member systems and the single transferable vote (for detailed accounts of the differences involved see Farrell, 2001). A key concept within the study of electoral systems is the 'break-even' point. This is the point at which a party's proportional share of the votes within an electorate can be expected to equal or exceed its share of legislative seats. The more proportional a voting system is, the lower this break-even point will be. In countries using proportional voting systems, the break-even point ranges from around 2 per cent in Denmark, Belgium and Holland to around 8 per cent in Germany where parties must receive at least 5 per cent of the vote before they are entitled to any seats (Taagepera and Shugart, 1989: 88–91). But whilst there is a considerable variation of break-even points within countries using proportional voting systems, it is nevertheless the case that break-even points in countries using plurality voting systems are consistently higher. In the case of, for example, elections to the American House of Representatives, the break-even point is around 45 per cent. To this extent, the simple contrast drawn here between proportional and plurality voting systems is defensible.

In the previous chapter I spoke about Duverger's 'Law': the claim that the use of plurality voting leads to two-party competition. The

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power in these countries are the ones that benefit from the maintenance of the status quo, it is tempting to view demands for electoral reform as being somehow utopian. But it must be remembered that the Labour government elected in Britain in 1997 seriously toyed with the idea of holding a referendum on electoral reform (Ashdown, 2001: 257–8) and that New Zealand abandoned plurality voting in favour of a form of proportional representation as recently as 1993 (Karp and Bowler, 2001).

Proponents and opponents of electoral reform seem broadly to agree that proportional representation will increase the effective number of parties, significantly reduce the chances of any one party gaining enough seats to form a majority government, and so increase the chances of coalition government (Box 3.1). What they disagree about is whether coalition government is a good or a bad thing. Proponents of electoral reform argue it is only fair that parties which receive a minority of the popular vote should have to share power. They also argue that coalition government forces parties to compromise and that compromise leads to

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corollary of this is Duverger's 'hypothesis', the claim that 'the simple-majority system with second ballot and proportional representation favours multi-partyism' (Duverger, 1954: 239). As Table 2.1 indicates, the effective number of parties in countries using proportional voting systems is indeed generally higher than it is in those using plurality ones. The relationship between proportional representation and multi-party competition is, however, an imperfect one and this is why political scientists continue to talk about a hypothesis rather than a law (Riker, 1982a). Australia, Ireland and Germany all use forms of proportional voting but have only between two and two and a half 'effective' parties. This has led many sociologists to argue that the key issue in determining the number of parties is not the electoral system but the number of cleavages in that society (Lipset and Rokan, 1967; Cox, 1997: 14–17 and references therein). In countries where there is only one, salient, socio-economic cleavage, including Ireland, Australia and Germany, there will, it is argued, usually only be two parties *whatever* the voting system employed. In recent years political scientists have however shown that the number of effective parties in a country will depend upon both the number of cleavages *and* the electoral system (Ordeshook and Shvetsova, 1994). The switch from a proportional to a plurality voting system will reduce the number of effective parties *whatever* the number of cleavages in that society. The switch from a plurality to a proportional voting system will only increase the number of effective parties *if* there are multiple cleavages in that society.

better and more effective public policies. Opponents argue that coalitions undermines electoral accountability by giving politicians rather than voters the power to decide which party or parties should form a part of the government. They also argue that coalitions give extremist parties an opportunity to enter government and that they give a disproportionate and unfair influence to often very small centrist parties. Finally, they suggest that coalitions are prone to instability (Schumpeter, 1942: 268–71; Hermens, 1951) (for a more detailed review of all these arguments, see Jenkins, 1998, and Bogdanor, 1984).

One way in which political scientists have contributed to this debate about electoral reform is by assessing the normative claims being made by participants in it. Consider, for example, the claim that power-sharing is a fairer method of governance. Political theorists are well-placed to identify the possible meanings and requirements of fairness and to determine whether plurality systems which give winning parties a larger proportion of the legislative seats than of the popular vote are inherently unfair (see Blau, 2004). Alternatively, consider the argument

about extremist parties. Is it a good thing that extreme parties are routinely excluded from office? Might it not be argued that democracy itself is compromised when this happens?

Political scientists have also evaluated some of the empirical claims made by participants about the consequences of coalition government. A number of their conclusions are listed below:

- 1 The use of proportional voting systems does indeed seem to be associated with an increase both in the effective number of parties and the incidence of coalition government. Of 216 governments formed between 1945 and 1987 in 12 West European countries using various types of proportional representation, only 14 were formed by single parties holding a majority of the legislative seats (Schofield, 1993: 3).
- 2 Coalition governments are somewhat less durable than governments formed by single parties. Using an extensive data-set, Kaare Strom (1990: 116) reports that single-party majority governments survived for, on average, 30 months whilst majority coalition parties only survived for 17 months. Such figures should, however, be treated with caution, for instability at the cabinet level may mask a great deal of stability in the distribution of particular cabinet posts. For when one governing coalition is replaced by another, many of the same politicians remain in post. Italian governments are, for example, notorious for their fragility. Yet during the postwar period Italy actually had one of the lowest turnovers in cabinet membership because the Christian Democrats dominated almost every government (Mershon, 1996).
- 3 On the basis of a statistical comparison between the performance of 36 democracies, Arend Lijphart (1999) argues that countries in which executive power is shared between parties have higher voter turnout, more liberal criminal justice systems and better equal opportunity records (but see Armingeon 2002 for a contrary analysis).
- 4 There is little evidence that coalition government gives extremist parties – conventionally defined as fascist and communist parties – much opportunity to participate in government (Budge and Laver, 1992: 9–10). Despite regularly acquiring over 30 per cent of the vote, the Italian Communist Party was, for example, excluded from government throughout much of the postwar period (Pridham, 1981).
- 5 Coalition government does, however, seem to give a great deal of political influence to often quite small centrist parties (Laver and

Schofield, 1990). Despite only ever acquiring around 10 per cent of the vote, the German Free Democratic Party was, for example, continuously in government between 1969 and 1998, first in a coalition with the Social Democrats (1969–82) and then with the Christian Democrats (1982–98).

Political scientists have arrived at these findings on the basis of detailed surveys about the composition, durability and policy outputs of West European governments over a period of time. As such, their findings offer a good example of the possibilities of an inductive approach to political science. What can rational choice theorists with their deductive models and heroic assumptions add to these findings? What is it they can tell us about coalition government that inductive political scientists cannot? The answer rational choice theorists would want to give is that they can add explanatory bite in the sense of not only telling us what happened, but why it happened.

Riker and the theory of the minimal-winning coalition

William Riker (1920–93) has almost certainly been the single most influential exponent of rational choice theory. Riker, who studied politics at Harvard University, first acquired an interest in rational choice theory in 1954 after reading a short paper on political power by two mathematical economists, Martin Shapley and Lloyd Shubick (Box 3.2). Within a few years, he had started to apply game theory to the study of politics and had written two short papers on the methodology of social science (Riker, 1957, 1958). In 1962 Riker moved to the University of Rochester, and over the next twenty or so years he went on to create America's first political science department devoted almost exclusively to the study of rational choice theory.

In contrast to much of Riker's later work on democracy and party competition, a small part of which we will touch upon in the following chapter, *The Theory of Political Coalitions* (1962) is a rather dry book for which it is difficult to develop any great affection. It does, however, contain an important argument about the nature of political competition. In *An Economic Theory of Democracy*, Downs, as we have seen, argues that politicians seek to maximize the total number of votes that they receive. For this reason, politicians will, he argues, seek to forge as broad an electoral coalition as possible composed of

Box 3.2 The Shapley–Shubik power index

Martin Shapley and Lloyd Shubick (1954) sought to devise a way of measuring the power of individuals on a committee. Assume for the sake of argument that you have a committee with three members, A, B and C, all of which cast their vote in the same way. Assume further that they vote in turn, one after the other. If issues are decided by majority voting then the second person who votes will always be pivotal in the sense of creating a majority.

The Shapley–Shubik power index can be calculated as follows. (i) Identify all the possible orders in which the members can vote either for or against a proposition. With three members there are six such orders: a (followed by) b (followed by) c, acb, bac, bca, cab, cba. (ii) Identify that person whose vote is decisive or pivotal for each decision. In this case because each member of the committee has one vote, the person who votes second is always pivotal. In other words, B will be pivotal in the first instance, C in the second, A in the third and so on. (iii) Determine the total number of times each person is pivotal. In this case A is pivotal on the third and fifth vote, B is pivotal on the first and sixth vote, and C is pivotal on the second and fourth vote. (iv) Divide the total number of times any one person is pivotal by the total number of times everyone is pivotal. This number is that person's power index. Here, each person is pivotal on two occasions out of a total of six so each person's power index is $1/3$.

To see why the index is so interesting consider a legislature in which there are 100 seats and in which party A has 50 members, party B 49 members and party C 1 member (Riker, 1969). In order to pass a measure, assume that the support of 51 members is needed. (i) There are, once again, six possible orders in which the parties can vote. If each person in each party votes the same way *and* each party votes the same way, the pivotal party is the one underlined in the following sequence: a**b**c, a**c**b, b**a**c, b**c**a, c**a**b, c**b**a. (iii) Party A is pivotal on four occasions, party B on one occasion and party C on one occasion. (iv) The power index of A is $4/6$. Despite having a very different number of seats, B and C each have a power index of $1/6$. In the previous section I noted that opponents of proportional representation and coalition government argue that it gives too much power to small parties. We can use the Shapley–Shubik power index to help us understand why this might be so.

The Shapley–Shubik index has been used to calculate the power of members of the European Union using weighted majority voting systems (see Aleskerov *et al.*, 2002; Herne and Nurmi, 1993; Hollwer and Widgren, 1999; and Garrett and Tsebelis, 1999). But remember that the index depends upon the crucial assumption that everyone votes in the same way. The index cannot therefore account for the way in which a person's preferences might constitute a source of power. In a committee in which four people always voted in one way and four other people always voted in another, the ninth person would be pivotal and possess a great deal of 'outcome' power (see Dowding, 1991: 59–63; Barry, 1980).

voters with potentially very different views. Riker echoes Downs in arguing that politicians are office-seekers who 'act solely in order to attain the income, prestige and power which come from being in office'. But he also argues that politicians regard the business of acquiring votes as a costly one taking time and effort and requiring them to make policy promises that, once elected, limit their freedom. Starting from this premise and drawing on the work of Oskar Morgenstern and John von Neumann (1953), Riker (1962: 32-3) argues that politicians will therefore seek to 'create coalitions just as large as they believe will ensure winning and no larger'. Such coalitions will be minimal-winning in the sense that the ejection of just one person or party from that coalition will render it no longer winning.

The Theory of Political Coalitions makes a case for understanding politics, all politics, as entailing the construction of minimal-winning coalitions. As such, the examples Riker uses to illustrate his argument range from nineteenth-century American domestic politics to the break-up of the Napoleonic Empire. Yet, since its publication, Riker's theory has been applied almost exclusively to the study of government coalition formation. There are some good reasons for this. The question of why one coalition might form rather than another is, as we have seen, an important one. Furthermore, this is a subject area in which there is no shortage of empirical data against which the claims of various models can be tested. But at the same time this narrow range of application does risk obscuring the significance of Riker's argument and the extent of his disagreement with Downs. The difference between these two is not, as the lay-out of the chapters in this book might imply, that the one is examining two-party competition and the other multi-party competition. It is rather that they are making very different assumptions about the ways in which politicians behave.

In order to see how the theory of the minimal-winning coalition might be applied to the study of coalition formation, we need to make the following formal assumptions. (1) A winning coalition is one whose membership constitutes at least one half plus one of the legislature. (2) Politicians are purely office-seeking and derive utility from occupying cabinet posts. The total amount of utility to be gained from being in office is fixed. Parties can bargain about the number of cabinet seats they receive but the total number of seats is fixed. (3) Coalitions control their membership. Parties can only join and remain within coalitions with the approval of the other members of that coalition. (4) Each instance of government formation is a purely isolated event. (5) There is perfect information. Parties know the rules and

payoff structure of the game and know that other parties know the rules and payoff structure as well.

Given these assumptions, it follows that parties will form minimal-winning coalitions. For if parties derive utility from their possession of cabinet seats and believe that the total number of such seats is fixed (assumption 2), they will try to maximize the number of seats they hold. If all a winning coalition needs is a bare majority in the legislature (assumption 1) and they know precisely how many seats each party has (assumption 5), then the parties in any proto-coalition will have a strong incentive to eject from that coalition any parties whose votes are not needed to sustain its majority. Coalitions control their own membership and can eject any party from that coalition (assumption 3). For this reason, only minimal-winning coalitions will form.

Consider, for example, a situation in which seven parties hold the following number of legislative seats: A (15), B (28), C (5), D (4), E (33), F (9), and G (6) (= 100) and in which any coalition must therefore secure 51 seats in order to form the government (Mueller, 2003: 280–1). Imagine that parties B (28 seats), E (33 seats) and G (6 seats) are considering whether to form a coalition. Between them, these three parties control a clear majority of 67 seats. But because B and E alone control 61 seats they can eject G from this coalition without compromising their winning status and by doing so can acquire for themselves whatever cabinet seats G had been offered in order to form a part of the coalition. The coalition between B, E and G is not, in other words, minimal-winning and so will not form. What are the minimal-winning coalitions? Given this configuration of seats there are 11: BE (61 seats), ABF (52 seats), ACE (53 seats), ADE (52 seats), AEF (57 seats), AEG (54 seats), ABCD (52 seats), ABCG (54 seats), ABDG (53 seats), CDEF (51) seats and DEFG (52 seats).

Taking their cue from Riker's work, a number of rational choice theorists have examined whether the coalition governments which have formed in West European countries have been minimal-winning (Laver and Taylor, 1973; Franklin and Mackie, 1984; Laver and Schofield, 1985). The results have proven remarkably consistent. Around one-third of all the governing coalitions formed have been minimal-winning. What are we to make of this figure? Because it is higher than might have been achieved simply through chance, rational choice theorists sometimes seem to imply that it ought to be considered reasonably impressive. But this is unpersuasive. The fact that a majority of the governments formed in Western Europe have been either surplus majority coalitions from which it would have been possible to

expel one member, or minority governments which do not even command a legislative majority, puts Riker's theory in, at best, an extremely poor light.

Policy-seeking parties

Rational choice theory is founded not simply on the assumption that actors are rational, but that they are self-interested. In the opening chapter I noted that most people have little sympathy with the view that people, politicians included, are exclusively self-interested. Rational choice theorists have nevertheless been able to retain and defend this assumption for two principal reasons. Firstly, because it is so flexible that it can be used to account for almost any kind of behaviour. Consider the assumption made within Riker's theory that politicians are self-interested office-seekers. How might we reconcile this assumption with the apparently abundant evidence that politicians argue with each other about policy, sometimes resign from office following policy disputes and retain consistent policy positions over a long period of time? The simple answer is that we can do so quite easily. Politicians who argue about policy can be interpreted as investing in reputations for reliability and responsibility which will enhance their long-term electoral appeal. How can this explanation be reconciled with politicians' own and very different accounts of their actions? It can be done so by recognizing that self-interested politicians will frequently have good self-interested reasons for not wanting to reveal their true motives (see pp. 214–16).

Rational choice theorists have also defended the assumption of self-interested behaviour by arguing that their work ought to be judged in terms of the accuracy of its predictions rather than the realism of its assumptions. Now in the case of two-party competition, the assumption that politicians 'formulate policies in order to win elections rather than win elections in order to formulate policies' has survived at least in part because there is plenty of evidence that parties *do* often converge upon the position of the median voter and plenty of scope to account for their failures to do so in terms of the absence of particular conditions (Ahmed and Green, 2000). I do not necessarily mean to suggest that this evidence is overwhelming or that rational choice theorists have sought carefully to falsify their theories. The point I am making is more of a sociological one. For better or for worse, there has been enough supporting evidence to sustain rational choice theorists

working in this area in their assumption that politicians are entirely self-interested.

In the case of multi-party competition, however, the overwhelming evidence that parties are more likely to form surplus majority or minority government coalitions than they are minimal-winning ones proved a watershed. Starting with Robert Axelrod (1970) and Abram De Swann (1973), rational choice theorists first qualified and then gradually abandoned the assumption of office-seeking behaviour in favour of one of policy-seeking. Rather than review the various models developed using this assumption, I want to show how policy-seeking behaviour might be used to account for the existence not only of surplus majority and minority coalition governments but some of the other empirical findings reported in the introductory section to this chapter.

Centre parties

Centre parties like the German Free Democrats routinely play a pivotal role in coalition formation. They can do so because they are the median party (Van Roozendaal, 1990, 1992). Assume now that there are five parties (A–E) which hold the same number of seats, that there is a single, left-to-right, dimension of competition, and that A is the most left-wing party, B the next most left-wing party and so on. Given these assumptions, C is the median party. Assume also that three parties are needed to form a winning coalition and that the final policy position of any governing coalition is an average of the policies of the parties composing it. This means that in the case of, for example, a coalition between A, B and C, the final policy position of the coalition will be B. Notice that there are a number of possible winning coalitions here, including A, B and D and A, D and E, which C, the median party, does not form a part of. But if parties are purely policy-seeking at least one of the members of any such coalition will always prefer to join a coalition with C. Consider, for example, the possible coalition between A, B and D. This will not form because parties A and B would prefer to form a coalition with C which is closer to their preferred positions.

Extreme parties

Political scientists have shown that extreme parties rarely form part of any governing coalition. Why is this so? If parties are purely policy-seeking, the median party will form a part of any winning coalition and play a decisive role in the coalition formation process. If, as we have

assumed, the final policy position of any governing coalition is an average of the policies of the parties composing it, then it is not difficult to see why C might prefer to form a coalition with B and D rather than A and B or D and E. But this nevertheless leaves us with an apparent problem, because it would appear that C ought then to be indifferent between forming a coalition with B and D and forming one with A and E as each will result in a final, average, policy of C. So why are extreme parties, in this case A and E, usually excluded from government? It may be that median parties calculate that coalitions forged with extreme parties will be unstable and so less likely to result in the successful implementation of policy.

Minority administrations

Many governments are formed by single parties lacking a legislative majority. If parties are purely office-seeking this is inexplicable because administrations of this sort should not be able to survive. But if parties are policy-seekers then the median party may well be able to govern alone as there will be no possible winning coalition all of whose members will prefer that coalition to minority rule by C. Consider, for example, a possible coalition between A, B and D. If this proto-coalition agreed to adopt a final policy to the left of C, then D would prefer C to govern alone and would pull out of the coalition. But if it instead settled upon a policy to the right of C, A and B would then prefer C to govern alone.

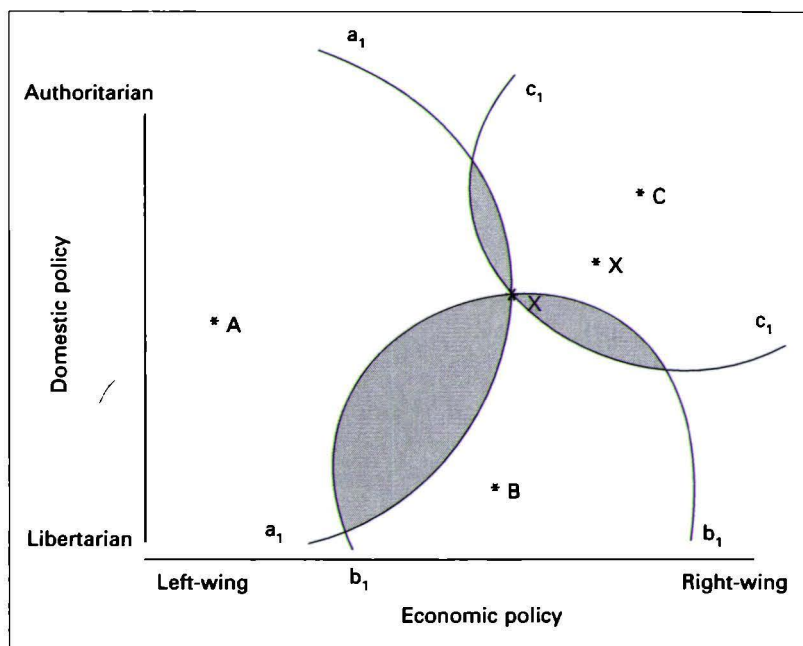
Majority administrations

Governments are often formed by a larger number of parties than are needed to form a minimal-winning coalition. This may happen when these surplus parties do not make any difference to the coalition's agreed policy and so do not make any difference to the utility of the policy-seeking members. Consider a possible coalition between A, C and E resulting in a final policy of C. For reasons that I have already outlined, this coalition would be unlikely to form. The point I want to make here however is that if it did, B and D could join it without their doing so making any difference to the final policy output. A, C and E would then have no reason to exclude B and D from joining their coalition. This is not to say that surplus coalitions will always form. Consider a possible coalition between A, B and C which a fourth party, D, applies to join. If A and B calculate that this will lead to policy being renegotiated and shifted to the right, they would reject D's application.

I have tried to show how the assumption of policy-seeking behaviour might be used to account for a number of the salient features of coalition politics. Yet there is a significant problem here. I have so far been assuming that there is only one, left-to-right, dimension of competition. Yet in those countries which use proportional representation and in which there is therefore usually multi-party competition, this is a particularly poor assumption to make. Political scientists have long since identified an enduring and positive relationship between the number of effective parties in a country and the number of issue dimensions (Taagepera and Shugart, 1989: 92–103). Put simply, countries with multi-party competition tend to have multi-dimensional competition and vice versa. That such a relationship exists is not surprising. Party leaders in countries with religious, linguistic and territorial as well as ideological cleavages are likely to choose proportional voting systems precisely *because* they allow for the representation of a larger number of parties (Grumm, 1958).

In the previous chapter I showed how the median voter theorem breaks down when there are multiple dimensions of competition. We can derive exactly the same result in the case of coalition politics. Figure 3.1 shows a situation in which there are three parties (A–C) whose preferred policy positions are mapped against both a socio-economic and libertarian–authoritarian dimension. Assume that each party has an equal number of seats and that two parties are therefore needed to form a winning coalition. Assume also that each party is purely policy-seeking. Which coalition will form? The problem here is that for any possible policy outcome a coalition may adopt, it will *always* be possible to find another policy which is majority-preferred to it. Assume, for example, that A and B form a coalition at X. By drawing a set of indifference curves (a_1a_1 , b_1b_1 , c_1c_1) intersecting at this point, we can identify those points any two of the three parties prefer to X. In this case, we can, for example, see that A and B prefer policies which are more left-wing and libertarian than X (those points in the large winset to the left of X), that A and C prefer policies which are more left-wing and authoritarian than X (those points in the winset above X) and that B and C prefer policies which are more right-wing and libertarian than X (those points in the winset to the right of X). By selecting any point within either of these areas we could then repeat this exercise and identify further points which were majority-preferred to this new status quo.

If parties are policy-seeking and there are multiple-dimensions we

Figure 3.1 *Coalition instability in two dimensions*

would expect the resulting process of coalition formation to possess a number of characteristics. Firstly, it should be highly unstable; as one governing coalition formed we would expect it to be immediately replaced with another. Secondly, we would expect centrist parties to play no more influential a role in the coalition-building process than any other type of party. Thirdly, and as an extension of this point, we would expect to see extremist parties regularly, albeit only temporarily, forming a part of winning coalitions. Yet this is of course precisely what political scientists studying the coalition process have *not* found. Centre parties do play an important role in the coalition formation process and extreme parties are usually excluded from winning coalitions. Coalition governments are slightly less durable than those formed by single parties, but they are far from being chaotic. The problem with assuming that politicians are policy-seeking and that competition takes place across multiple dimensions is that whilst each assumption seems individually plausible, they combine to generate a set of findings entirely at odds with what we actually know about coalitions.

The portfolio-allocation model

In recent years rational choice theorists have sought to develop models of the coalition formation process which can be used to explain why, for example, centre parties play such an influential role in the coalition process, but in which it is assumed not only that politicians are policy-seekers but that there are multiple dimensions of competition. Two such attempts have proven particularly influential: Norman Schofield's (1995, 1997) theory of the political 'heart' and Michael Laver and Kenneth Shepsle's (1996, 1998) portfolio-allocation model. In this section I will pay particular attention to Laver and Shepsle's model. This is partly because Schofield's theory of the political heart bears a close resemblance to arguments about the existence of an uncovered set. It is also because Laver and Shepsle's model has, as we will subsequently see, provided the inspiration for more recent work on the ways in which specific institutional arrangements can affect the outcome of coalition negotiations.

The single most important assumption Laver and Shepsle make in their model, the original sin to which their critics relate most of their problems, is that of ministerial discretion. Coalition theorists have usually assumed that parties bargain over and reach a compromise about each of the policies they pursue in office. Laver and Shepsle argue that this is a mistake. The process of government formation is not one in which parties bargain directly about policy within a particular area, but is instead one in which they bargain about which ministry is to be allocated to which party. This is not to say that policy is unimportant. Parties negotiate about control of ministries precisely *because* they recognize that control of particular ministries will provide them with control over the formulation and implementation of policy in that area. This is for a number of reasons. (1) Ministers have considerable agenda-setting powers; policy changes may have to be approved jointly by a cabinet but will usually be initiated by particular ministers. (2) Cabinet ministers do not usually have the expertise necessary to question proposals made by other ministers. Policy decisions may normally be taken at cabinet level but cabinet decision-making is usually a formality. (3) Ministries are responsible for the implementation of policy; policies are agreed by cabinets but ministers are usually given discretion in implementing them.

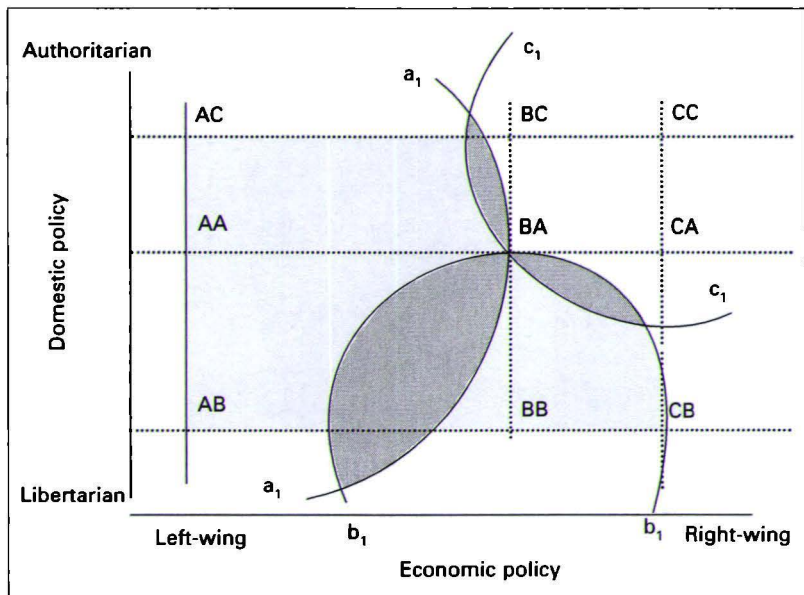
The cabinet is not simply a *collection* of coalition partners, but instead is a *distribution* of specific powers over policy formulation

and implementation among those partners. Thus, the very same set of parties in a cabinet comprises quite different effective governments if cabinet portfolios are reallocated between parties. (Laver and Shepsle, 1996: 282; original emphasis)

To see why the assumption of ministerial discretion is such an important one, assume, once again, that there are three parties (A–C) with the same policy positions as those shown in Figure 3.1. But assume now that policy on the left–right dimension is controlled by the finance office and that policy on the authoritarian–populist dimension is controlled by the interior office. In Figure 3.1 it was assumed that *any* point in this two-dimensional space was a possible policy outcome. But if policy is controlled by departments there are, as Figure 3.2 indicates, only nine possible policy outcomes: AA in which party A holds both the finance and interior offices, AB in which A controls the finance office and B the interior office, BA in which B controls the finance office and A the interior office, AC, CA, BB, BC, CB and CC.

This reduction in the available political space can, firstly, be used to

Figure 3.2 *Coalition stability with portfolio allocation*

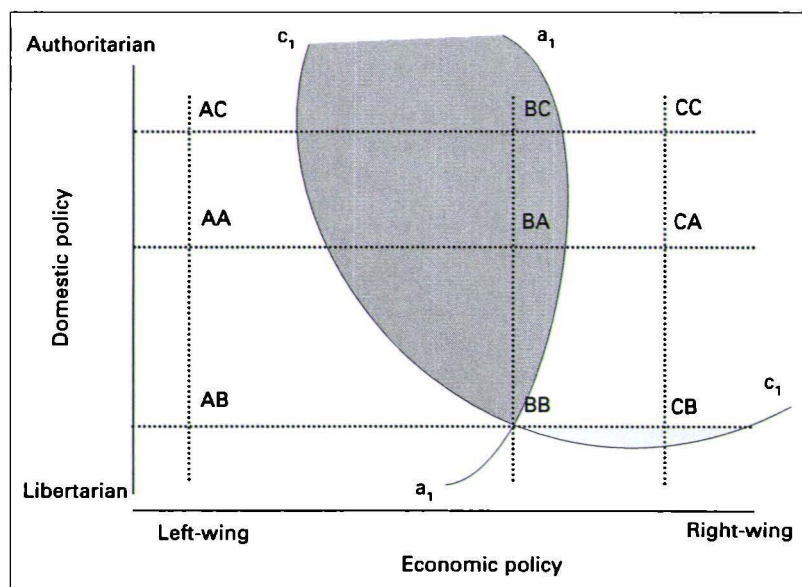


Source: slightly adapted from Laver and Shepsle, *Making and Breaking Governments* (Cambridge University Press, 1996), p. 64.

account for the relative stability of the cabinet-formation process. Assume that a governing coalition in which B controls the finance office and A the interior office is in place (that is, at point X in Figure 3.1). In Figure 3.2 the lines a_1a_1 , b_1b_1 and c_1c_1 once again show those points each party prefers to this status quo. But notice that whilst there are plenty of points which are majority-preferred to the status quo, none of the feasible cabinets falls within them. Because there are no feasible majority-preferred alternatives to it, the coalition between B and A will therefore survive. In this way, ministerial discretion generates stability.

Secondly, the assumption of ministerial discretion can be used to account for the existence of single-party minority governments. Figure 3.3 shows another situation in which there are three equally sized parties and nine possible policy outcomes. Assume that B has formed a minority administration and taken control of both the finance and interior offices. The large winset contained within the indifference curves a_1a_1 and c_1c_1 shows those outcomes A and C prefer to BB. Notice that of all the possible alternative cabinets, two fall within this area. The first is BA in which B holds the finance and A holds the interior office.

Figure 3.3 *Coalition stability with 'strong' parties*



Source: slightly adapted from Laver and Shepsle, *Making and Breaking Governments* (Cambridge University Press, 1996), p. 64.

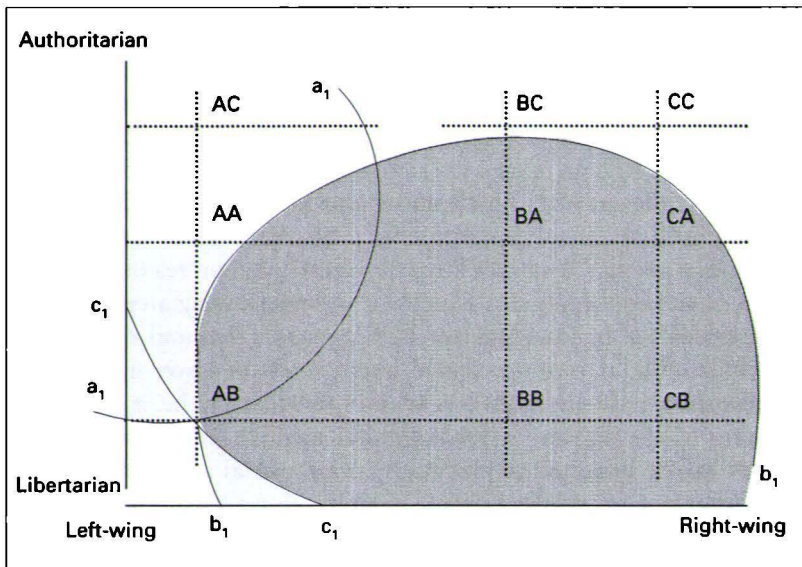
The second is BC in which B holds the finance and C holds the interior office. But this means that B forms a part of each of the alternative coalitions which are majority-preferred to BB. Such are the ideological differences between A and C that they cannot form a coalition they each prefer to BB. In this sense B is a 'strong party' (Laver and Shepsle, 1996: 69). If it can hold its nerve and face-down any implausible threats from A and C to form a joint administration it will be able to govern alone.

Thirdly, the assumption of ministerial discretion can be used to account for both the preponderance of centre parties and the exclusion of extreme parties from coalition government. For reasons already outlined, the only coalitions which will form following an election are those which are majority-preferred to the status quo and which there are no feasible majority-preferred alternatives to. Laver and Shepsle demonstrate that such coalitions are far more likely to be at or near the position of the dimension-by-dimension median. This is why centre parties can be expected to play such an influential role in the cabinet formation process whilst extreme parties – those located the furthest from this point – are routinely excluded from government. The basic logic of this argument is not difficult to follow. For any given distribution of parties and any given set of ministerial portfolios, the winsets of those possible cabinets located a significant distance away from the position of the dimension-by-dimension median will be larger than those located near it. All things being equal it is therefore more likely that these winsets will contain one of the feasible coalition alternatives. To see this notice that the dimension-by-dimension median is actually located at BA (B is the median on the left–right dimension with A to its left and C to its right. A is the median on the authoritarian–libertarian dimension. B is a more libertarian party and C is a less libertarian party). As we have already seen, there are *no* feasible majority-preferred coalitions to this status quo. Figure 3.4 shows the winsets of the cabinet, AB, located furthest from this point. Notice here the size of this coalition's winsets and the existence of eight feasible majority-preferred alternatives to it (AA, AC, BB, BA, CB, CA).

The transaction costs of policy agreements

The most important and controversial assumption Laver and Shepsle make in their model is of course that of ministerial discretion. In this section I want to show how critical debate about it has stimulated

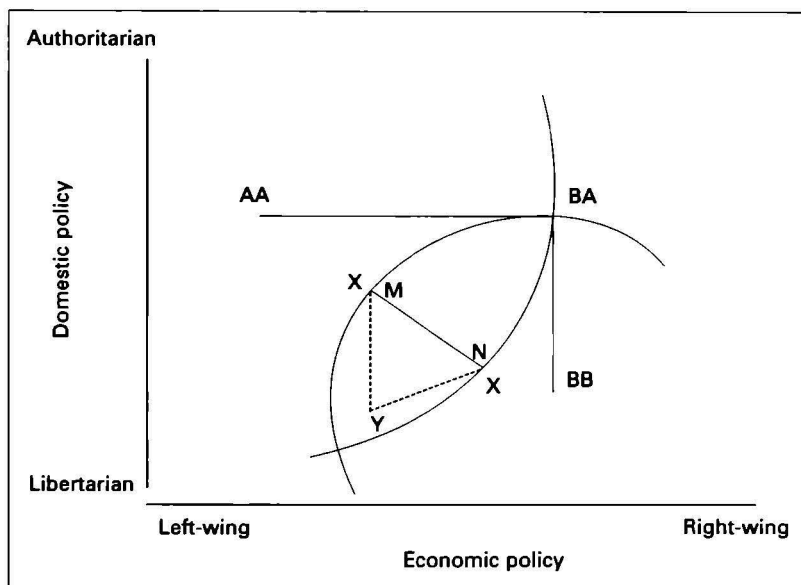
Figure 3.4 *Coalition stability and the dimension-by-dimension median*



research into the ways in which institutions and reputations affect coalition negotiations. Before looking at these criticisms, it is worth briefly noting that Laver and Shepsle themselves are quite defensive about the assumption of ministerial discretion. On the one hand, they are prepared to affirm that if their model is to 'say something of relevance about the world', that the assumptions it rests upon 'must derive in some way from the real world' (Laver and Shepsle, 1999: 395). Because they clearly do believe that their model can tell us something about the real world, the implication of this seems to be that the assumption of ministerial discretion is a defensible one. Yet, at other times, they suggest that this assumption is a 'provisional and convenient fiction' which 'scholarly advances over our initial efforts' will refine and develop (1999: 414).

The problem with the assumption of ministerial discretion is that it would seem to deny to politicians the capacity for deal-making and compromise which animates politics in general and coalition negotiations in particular. For the sake of argument, let us start here by assuming that ministerial autonomy is the commonly recognized default position within coalition negotiations; that parties will, in the absence of any negotiated agreement to the contrary, give other parties absolute

Figure 3.5 Policy compromises and portfolio allocations



and unqualified control over one ministry in return for their control of another. But even given this starting-point we still need to show why parties will be unable to agree on policy compromises that will leave *each* of them better-off. To see what is at stake here consider Figure 3.5. We will start here by assuming that the default position is a coalition between A and B in which A controls the interior office and B the finance office. Rather than look at the 'winsets' of coalitions containing alternative parties, consider, instead, the set of outcomes that A and B *themselves* prefer to this point.

On the assumption that both parties care equally about the two issues, the winset below and to the left of BA shows those points A and B prefer to BA. That there are such a set of mutually preferred positions should come as no surprise. It is a cornerstone of economic theory that individuals can enhance their welfare through trade and this is all that is happening here. The winset shows those points in which A has traded some policy ground to B on interior affairs and in which B has, in return, traded some ground to A on finance matters and in which both, as a result, are better-off.

So even if ministerial discretion is a default position, A and B still have an incentive to reach a policy deal. Can we say precisely what

Box 3.3 Transaction Costs

Transaction costs are the costs of exchanging rather than producing goods and services. More formally, they are 'the costs of deciding, planning, arranging and negotiating the action to be taken and the terms of exchange when two or more parties do business; the costs of changing plans, renegotiating terms, and resolving disputes as changing circumstances require; and the costs of ensuring that parties perform as agreed' (Milgrom and Roberts 1990: 60). Transaction costs arise from a number of different sources:

- 1 *Complexity*. A proposed exchange can be described as being complex when a large number of contingencies have to be considered by both parties to that exchange. Consider the position of a government department negotiating with a large software firm to deliver a new way of processing welfare benefits. The transaction costs of such an exchange are likely to be high because the government will struggle to specify what, precisely, constitutes satisfactory performance.
- 2 *Thinness*. By signing a contract with a particular agent to undertake a particular piece of work, an organization may be leaving itself with little alternative but to work with that firm in the future. Think, once again, of a software firm bidding for a contract. Once a system has been installed it will be very costly to change supplier. In such a situation, the government may hesitate about signing a potentially beneficial contract in the short term for fear of being exploited in the long-term.

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kind of a deal they will reach? Without making additional and quite specific assumptions about, for example, bargaining tactics, this is a not a question that can be easily answered. On the assumption that A and B are rational and that each will seek to maximize their gains from trade, what we can however say is that the eventual outcome of their policy negotiations is likely to fall somewhere on the 'contract' line XX. This line shows all those points in which the possible gains from policy compromise between A and B have been exhausted. Consider, for example, a position like Y which falls within the winset of BA but below this contract line. At this point, the possible gains from policy compromise have not been exhausted because it would be possible for A and B to move closer to their respective 'bliss' points at AA and BB by agreeing to any compromise within the area YMN. Only at those points along the contract line will the policy relationship between A

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- 3 *Information asymmetries.* If a person is unsure about the quality of the product they are buying, they may have to invest resources in order to try and find out what they know they do not know about that product. A potential car buyer may, for example, have to pay for an independent inspection by a mechanic in order to find out whether they are being sold a 'lemon' by an unscrupulous dealer (Akerlof, 1970). The problem here is that costs of acquiring this information may be greater than the potential benefits to be derived from the exchange. In a similar way, a person who knows that they do not know whether their partner is fulfilling the terms of an agreement may have to pay someone to collect that information for them. The costs involved in monitoring compliance within an agreement may, once again, be greater than the potential benefits of the trade.

If we assume that transaction costs are zero then every possible mutually beneficial exchange will take place. This is the so-called 'Coase Theorem' (Coase, 1960) (see Box 3.4). If transaction costs are positive then potentially beneficial exchanges may be threatened. In such cases, actors will design and use institutions that minimize transaction costs and so make exchange possible. Transaction cost analysis is one of the more prominent strands of the 'new institutionalism' that has swept through the social sciences. Whether the theory is of the firm (Williamson, 1975), bureaucracy (Horn, 1995), state (North, 1990) or legislature (Weingest and Marshall, 1988), the transaction cost story is that institutions evolve to economize on transaction costs and that different levels of transaction costs lead to the development of different types of governance structures (Hindmoor, 1998).

and B take on a zero-sum form in which the gains of one party will be the losses of another.

So if there are potential mutual gains from policy compromise, can we assume that these gains will necessarily be realized? At this point, it is open to Laver and Shepsle to defend the assumption of ministerial discretion by arguing that the 'transaction costs' (Box 3.3) of reaching and enforcing policy deals will be greater than the potential benefits to be derived from them and that parties will therefore revert to the default position of ministerial discretion. Given that ministers have, according to Laver and Shepsle, considerable autonomy over the implementation of policy within their departments, why should any party trust its coalition partner to abide by the terms of any policy trade? The deals made between parties are not, after all, like the contractual agreements made between private individuals or firms who

Box 3.4 The Coase theorem

The so-called Coase theorem, named after the American economist Ronald Coase (1910–) is concerned with situations in which the ‘actions of business firms have harmful effects on others’ (Coase, 1960: 1) and offers a critique of the conventional argument that such ‘negative externalities’ can only be resolved through coercive government intervention and careful regulation.

Imagine a situation in which a cattle rancher and a farmer own adjoining plots of land between which there is no fence. The rancher’s cattle can be expected to roam on to the farmer’s land damaging his crops. Assume that the rancher must, however, compensate the farmer for any damage. It would then only be in their interests to allow their cattle to graze if *either* the profits they could make from doing so would be greater than the costs of the compensation they would have to pay, or the profits they could make from doing so would be greater than the costs of building a fence to stop their cattle from roaming. Either way, it is in the farmer’s self-interest to make an economically efficient decision. What, however, if the rancher is not obliged to make any compensation payments? In this case it would appear that the rancher has no incentive to take account of the externalities generated by their action and that the market will fail. But this is not the case. The farmer will have an incentive to either pay the rancher to reduce the number of cattle they have or to build a fence *if* the profits they expect to make from their crops are greater than the profits the rancher expects to make or the cost of building the fence.

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can, in principle at least, be enforced through the courts. Political deals are above and beyond the law. But such a conclusion seems unduly pessimistic. There are good reasons for thinking that parties will be able to reduce the potential transaction costs involved in the formulation and enforcement of policy deals and that policy deals will indeed be made.

Coalition partners, once they have agreed to make policy trades, will need to reach agreements about what kind of policies to pursue in various issue areas. The time spent negotiating such agreements represent one possible source of transaction costs. These costs may be quite high because politicians will not only have to settle existing policy differences, but anticipate possible future differences relating to issues that have not yet even arisen. Yet the available evidence here suggests that politicians actually invest relatively little time in coalition negotiations and that they have therefore managed to minimize this transaction cost

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The result here may be judged unfair. Why should the farmer have to pay the rancher to stop damaging their crops? But it *would* be economically efficient. So long as property rights are demarcated and responsibility for externalities assigned, there is no need for government intervention. Self-interested actors will be able to bargain their way towards an efficient solution and will be able to do so *whatever* the initial allocation of property rights is:

It is necessary to know whether the damaging business is liable or not for damage caused since without the establishment of this initial delimitation of rights there can be no market transactions . . . but the ultimate result (which maximizes the value of production) is independent of the legal position if the pricing system is assumed to work without cost. (Coase, 1960: 8)

The Coase theorem only holds when there are zero transaction costs, an assumption Coase (1960: 15) recognizes is 'very unrealistic'. When there are positive transaction costs actors may be unable to reach potentially mutually beneficial exchanges and the results of any process of self-interested bargaining may not be efficient. In this case, the farmer and the rancher will not only have to reach an agreement, they will have to agree upon how much damage is being done to the crops and whose cattle are causing the damage. They will have to agree on how and when compensation payments are to be made and will have to find a way to, for example, prevent the farmer from exaggerating the extent of the damage to his crops in order to extract additional compensation. All these represent potentially considerable transaction costs.

(see Strom and Mueller, 2005). One way in which they seem to have done so is by using initial negotiations to agree *ways* in which future policy disputes will be settled.

Once policy agreements have been reached, they need to be monitored and enforced and this represents another potential source of transaction costs. Yet parties can usually rely upon a number of institutional devices to minimize the extent of these costs and so make deals possible. Parties can appoint junior ministers to departments controlled by one of their coalition partners to ensure that policy promises are being kept (Thies, 2001); they can also agree that legislation initiated within ministries should be subject to detailed examination by cabinet sub-committees prior to more limited discussion at full cabinet meetings (Dunleavy and Bastow, 2001); and they can also use their own members on backbench legislative committees to monitor the compliance of parties in other ministries (Martin and Vanberg, 2004).

In formulating the theory of the minimal-winning coalition, Riker, it will be recalled, assumed that each instance of government formation is a purely isolated event. On the one hand, and as we might expect, Laver and Shepsle offer a far more sophisticated analysis. The portfolio-allocation model assumes that each instance of cabinet formation begins with an incumbent, caretaker, government in place and that this government will only be replaced if there is a feasible majority-preferred alternative to it. On the other hand, Laver and Shepsle, like Riker, ignore the potential importance of reputation in the coalition formation process. Parties will certainly be tempted to renege upon policy agreements, but they may well be forced to recognize that the short-term benefits of doing so are likely to be outweighed by the long-term costs of acquiring a reputation for being untrustworthy. For such a reputation is likely to make them unattractive coalition partners in future years (see Axelrod, 1984; Frank, 1988; Shepsle, 1996b). The incentive parties have to acquire good reputations may also explain why coalition government is characterized by relative stability. If parties are, as I have suggested, able to negotiate policy deals at any point in political space, then, as we have seen, it is likely, given the existence of multiple dimensions, that there will always be some majority-preferred coalition to the status quo. Yet parties may have to set the potential policy gains from leaving one coalition and joining another against the long-term costs of acquiring a reputation for being untrustworthy and abandoning their partners.

In future years, rational choice theorists will continue to explore the way in which particular institutional arrangements or reputations affect coalition negotiations. Part of this research will be empirical in nature. Political scientists will, for example, want to test whether parties are indeed more likely to place junior ministers in departments controlled by the coalition partners with which they have the strongest policy disagreements. Yet there is no reason why this research ought to take an exclusively empirical form. For it might be argued that rational choice explanations are only satisfactory to the extent that they provide an accurate, although not necessarily comprehensive, account of the *actual* beliefs and desires actors have. Now on many occasions rational choice theorists will have good reason to doubt whether actors can be trusted to provide an accurate account of their reasons for acting in a particular way. On such occasions it may well be necessary to search for empirical relationships that can be interpreted as revealing something about their beliefs and desires. But coalition theory is not necessarily one of those occasions. In trying to decide whether

junior ministers really do perform a 'watchdog' role, rational choice theorists need to find out whether party leaders and junior ministers regard *themselves* as performing such a role and this will require interviewing the ministers themselves.

Assessment

By what criteria ought we to evaluate coalition theory? The instrumental answer routinely offered by rational choice theorists themselves is that we ought to do so in terms of its predictive capacity. Of all of the areas of rational choice theory examined in this book, coalition theory, blessed as it is with a strong data-set against which models can be tested, is perhaps the most stridently empirical. Laver and Shepsle seem, for example, in no doubt that their model ought to be judged in terms of the accuracy of its predictions. One such prediction is that the status quo cabinet in place at the start of a cabinet formation process will either remain in place at the end of that process or be replaced by a cabinet contained within its winset. Using data on cabinet formations between 1945 and 1989, they show that this prediction was true of 162 of 220 possible instances; a far better success rate, they argue, than could have been achieved by luck (for further empirical evidence on the portfolio-allocation model see Laver *et al.*, 1998 and Back, 2003).

So when judged in terms of this criterion, how does coalition theory perform? In a review of the portfolio-allocation model, one critic of the rational choice method, Paul Warwick (1999), has argued that it is possible to make far more accurate predictions about coalition formation and durability by statistically analysing the results of previous instances of cabinet formation and extrapolating from these results. In the case of, for example, cabinet durability, he argues that statistical analysis shows that just two factors account for most of the variance in cabinet survival (Box 3.5). The first of these is whether or not the coalition commands a legislative majority, and the second is how ideologically compact it is. Knowing just these two pieces of information about any existing coalition, it is, Warwick argues, possible to make far more accurate predictions about the likely durability of that coalition than those derived from the portfolio-allocation model.

Now rational choice theorists might respond to this challenge by arguing that the predictive capacity of rational choice theory will continue to improve and eventually match or even surpass that of inductivists like Warwick. But can we really expect coalition theorists

Box 3.5 Cabinet durability

This chapter has focused on the cabinet-formation process. In recent years political scientists in general and rational choice theorists in particular have, however, started to look more closely at the circumstances in which cabinets fail. As might be expected, many of the factors which appear to affect cabinet formation also affect cabinet failure. Yet these findings are nevertheless worth briefly examining (for general reviews see Grofman and Van Roozendaal, 1997, and Laver, 2003).

Why do cabinets fail? In a purely descriptive sense the composition of a cabinet will change when either (i) new elections are held, (ii) a senior cabinet member dies or is forced to retire because of ill-health or personal scandal, (iii) there is a parliamentary vote of no-confidence, (iv) internal policy disagreements precipitate the withdrawal of one party, (v) the cabinet voluntarily resigns, or (vi) there is a conflict between the cabinet and the head of state (Grofman and Von Roozendaal, 1997: 425). Klaus Von Beyme (1985) examined the break-up of 289 cabinets in 17 democracies between 1947 and 1983. He found that 143 of these occurred because new elections had to be held, 15 because of the death or serious illness of a prime minister, 20 because of a vote of no-confidence, 61 because of internal policy disagreements, 20 because of voluntary resignation and 5 following conflicts with the head of state. Timing would also appear to matter here. Warwick and Easton (1992) find that cabinets are more likely to dissolve the closer they come to a required general election.

What properties do more durable cabinets display? Research indicates that cabinets are more likely to survive if: (i) the overall party system is dominated by one or two large parties (Taylor and Herman, 1971), (ii) electoral volatility – the amount of voting turnover between elections – is low (but see King *et al.*, 1990), (iii) the cabinet is ‘minimal’-

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to develop formal models taking account of, for example, the transaction costs involved in policy discussions and to then derive from these models predictions about the likely outcome of particular negotiations? My own view is that we cannot. The number of factors likely to affect the course of negotiations is such that theorists will only be able to construct models whose predictions hold, all other things being equal (but see King *et al.*, 1990).

Yet it is, I think, a mistake to judge rational choice coalition theory simply and exclusively in terms of the accuracy of its predictions. As I argued in the opening section of this chapter, we might instead see it as being the role of rational choice theorists to explain why and when the empirical findings discovered by other political scientists hold. Rather than seeing inductive and deductive approaches to the study of politics

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winning rather than either undersized or oversized (Dodd, 1976) (but see Grofman, 1989), (iv) there is a low level of ideological polarization within the party system (Warwick, 1992), (v) the members of the cabinet are ideologically 'connected' to each other (Warwick, 1994), (vi) the cabinet includes the median party or, failing that, a party close to the position of the dimension-by-dimension median (Van Deemen, 1991), and (vii) there are limitations on the ability of cabinet members of the prime minister to dissolve the parliament and call new elections. Against such an 'attributes-based' approach, Browne *et al.* (1988) suggest that cabinet dissolution is most often triggered by random external shocks such as scandals, international conflicts and monetary meltdowns. In more recent work it is however customary to view cabinet survival as being determined by both random external shocks *and* the internal properties of the coalition itself (King *et al.*, 1990).

There is now plenty of data on the factors which are associated with cabinet durability. There is also plenty of scope to account for the causal significance of these factors in terms of specific, *ad hoc*, arguments. There is however a relative dearth of formal models which can be used to predict the circumstances in which cabinets will fail. In seeking to account for this fact, Laver (2003: 33–5) makes the important point that rational choice models of cabinet formation all make use of the equilibrium framework. Within such a perspective it is, he observes, very difficult to account for the break-up of a coalition because the very fact of such a break-up implies that the cabinet could not have been in equilibrium. It is of course always possible to posit external 'shocks' which push an existing cabinet out of equilibrium (see Laver and Shepsle, 1998), but such arguments are not an effective substitute for endogenous models of cabinet dissolution requiring dynamic rather than static-equilibrium analysis.

as necessarily being in competition with each other, as is normally the case, we might instead see them as being complementary. Perhaps surprisingly given their positivist starting-point in *Making and Breaking Governments*, this is actually the position Laver and Shepsle themselves have come to adopt in recent years. Although disputing many of the technical details of Warwick's argument about the shortcomings of the portfolio-allocation model, they do, nevertheless, accept the basic premise of his argument: that it is possible to make more accurate predictions about the formation and durability of coalition governments using statistical induction. Yet they also argue that this form of analysis cannot be used to provide a coherent *explanation* of the coalition process. All this form of analysis can do, they maintain, is 'hint at some factors', like ideological diversity, which 'might be at

work' but which 'do not hang together' and so cannot be used to provide an explanation of how or why particular events occurred (Laver and Shepsle, 1999: 396). The provision of such an explanation, one which will allow us to understand what is going on in the world around us, requires the construction of 'coherent and parsimonious analytical models' which can show us how different factors act and interact with each other' (*ibid.*).

Chapter 4

Kenneth Arrow and Social Choice Theory

Overview: In the two previous chapters I have examined party behaviour in two-party and multi-party democracies. This chapter takes a largely normative rather than positive form in so far as it looks more generally at the efficacy of voting and democracy. Two key texts are examined. The first, Kenneth Arrow's (1951) *Social Choice and Individual Values*, has been interpreted as showing that it is impossible to provide a normative rationale for making social decisions when individual members of a society have different interests or opinions. The second, William Riker's (1982a) *Liberalism Against Populism*, uses Arrow's theorem and the work in social choice theory it inspired to defend a 'liberal' rather than 'populist' theory of democracy. Arrow and Riker's work has cast a 'very long, dark shadow over democratic politics' (Cain, 2001: 111). In the final section of this chapter I argue that this work does, however, need to be placed in context. Social choice theory may show that democracy is problematic and imperfect; it does not, however, show that democracy is impossible or necessarily undesirable.

Setting the stage: democracy and the public will

Samuel Huntington (1991: 7) defines a country as democratic if its most powerful collective decision-makers are selected through fair, honest and regular elections in which candidates freely compete for votes and in which virtually the entire adult population is eligible to vote. Using this definition Huntington identifies three historical 'waves' of democratization. In the first long wave between 1828 and 1926, around 30 countries including Australia, the UK, the USA and New Zealand underwent the transition to democracy. In a second and shorter wave between 1943 and 1962 around 25 countries including Brazil, Sri Lanka and Jamaica democratized. In a third wave which started in the mid-1970s and has yet to dissipate, more than 30 countries including Spain, Portugal and Greece, Chile, Argentina and

Uruguay, Hungary, Poland and the Czech and Slovak republics, Estonia, Lithuania and Latvia, and, more recently and problematically, Iraq and the Ukraine have embraced democracy. There are of course still countries out there, North Korea, Saudi Arabia and Libya amongst them, which remain rigidly authoritarian. There are also democratic countries which may one day experience an anti-democratic 'backlash' of the sort afflicting Germany in the 1930s and Brazil, India and South Korea in the late 1960s and early 1970s. In Pakistan, for example, the 'war against terror' has recently been used to justify the withdrawal of democratic freedoms. Yet, for the moment, and as Albert Weale (1999: 1) observes, it would seem that democracy has 'ceased to be a matter of contention and become a matter of convention'.

Political theorists have often expressed a determined cynicism about or outright hostility to democracy (Mackie, 2003: 2; Dahl, 1989). Plato argues that democracy leads to social anarchy. Marxists argue that representative democracy is a sham and that real power is monopolized by business (see Elster, 1985: 408–11 for a discussion). Elitists like Pareto and Michels argue that democratic politicians pander to the lowest common policy denominator. More recently, political scientists have argued that democracy causes government 'overload' (King, 1975; Brittan, 1975) and that voters have extremely fickle and ill-informed preferences (Converse, 1970; Page and Shapiro, 1992: 3–15 and references therein). In recent years, a sub-branch of rational choice theory known as social choice theory has joined this chorus of dissent.

Voting, whether it involves voting directly for some policy in, for example, a referendum, or voting indirectly for a candidate in a legislature, is a defining part of the democratic process. Voting reveals the 'public will' or 'collective interest'. The critique of democracy offered by the two social-choice theorists examined here, Kenneth Arrow and William Riker, is a critique of voting. Arrow and Riker argue that there is no method of counting or, as they prefer, aggregating individual preferences that is fair and accurate:

Outcomes of voting cannot, in general, be regarded as accurate amalgamations of voters' values. Sometimes they may be accurate, sometimes not; but since we seldom know which situation exists, we cannot, in general, expect accuracy. Hence we cannot expect fairness either. (Riker, 1982a: 236)

It is worth emphasizing that this is *not* an argument about any particular method of voting. The target social choice theorists have in their

sights is not plurality voting, proportional representation or some other specific way of counting votes. It is, rather, and more generally, the very idea of being able to aggregate the preferences of individual voters in such a way as to generate a fair and accurate decision or 'social choice'. Stated in this way, the concerns of social choice theorists appear both mysterious and fantastical. Mysterious because it is unclear what, precisely, such a sweeping claim might involve. Fantastical because the notion that voting might be an inherently flawed way of reaching social decisions seems, in this democratic age, a counter-intuitive one. Yet, as we will see, the basic argument involved here, although routinely presented in a technical way, is actually quite simple.

The precursors of social choice theory

Social choice theory did not emerge as a recognized subject area until the publication of Arrow's *Social Choice and Individual Values* in 1951. Yet as Iain McLean and Arnold Urken (1995) carefully demonstrate, many of the puzzles and inconsistencies associated with voting that Arrow carefully dissects were actually discovered and discarded in the eighteenth century. Of particular significance here is the work of two French mathematicians and members of the Paris Academy of Sciences, Jean-Charles Borda (1733–99) and the Marquis de Condorcet (1743–94). Borda, whose obituary records that he 'worked much and published little', delivered a paper to the Paris Academy in 1770 showing that the winner of a plurality or 'first-past-the-post' election might be opposed by a majority of voters (McLean and Urken, 1995: 25). Consider, for example, the preferences of the seven (1–7) voters in Table 4.1 who must select between three options (x–z). The first, second and third preferences of the voters are shown. In a plurality election y will receive the votes of the third and fourth voters, z the votes of the fifth and seventh voters and the winner, x, the votes of the first, second and sixth voters. Yet a majority composed of the third, fourth, fifth and seventh voters clearly prefer both y and z to x.

The obvious problem with the plurality voting system is that it fails to take account of the full range of voters' preferences and, in this case, of the fact that x is the last choice of four voters. The solution, Borda argued, was to devise a method of voting taking account of this information. The result, the eponymous Borda count, works as follows. For any given number of options (n), assign $n - 1$ points

Table 4.1 *Majority voting generates a majority-opposed decision*

Voters	Preferences			Borda count points score		
	1st	2nd	3rd	x	y	z
1	x	y	z	2	1	0
2	x	z	y	2	0	1
3	y	z	x	0	2	1
4	y	z	x	0	2	1
5	z	y	x	0	1	2
6	x	y	z	2	1	0
7	z	y	x	0	1	2
Total				6	8	7

to the option the voter ranks first on their ballot paper, $n - 2$ to the option they rank second and so on; the winner being the option receiving the most points. The right-hand part of Table 4.1 shows how this works by translating the preferences of the seven voters into point tallies. It shows that y is the Borda winner and that x receives the lowest score.

In an essay published in 1784, the Marquis de Condorcet, who was the Permanent Secretary of the Paris Academy until he fell to the Jacobin terror, showed that the Borda count is, however, vulnerable to exactly the same problem as plurality voting. It will sometimes select as the social choice an option a majority of the electorate oppose. Table 4.2 shows the preferences of five (1–5) voters over five (a–e) options. As the right-hand part of the table shows, e wins the Borda count with 16 points. Yet a series of pair-wise comparisons shows that a majority composed of the first, third and fourth voters prefer d to e. The claim that e ought to be the social choice because it is the Borda winner therefore appears questionable.

It is a defect of both the plurality and Borda methods that they sometimes fail to select the majority-preferred option. It was therefore Condorcet's suggestion that the social choice ought to be determined by making a series of pair-wise comparisons between *all* the options and selecting that one (the 'Condorcet winner') which is majority-preferred to all the others. In Table 4.1 we have already seen that a majority prefers d to e. By looking more carefully at this table, it can be seen that a clear majority also prefer d to either a, b or c. There is,

Table 4.2 *Borda count winner is majority-opposed*

Voters	Preferences					Borda count points score				
	1st	2nd	3rd	4th	5th	d	e	a	b	c
1	d	e	a	b	c	4	3	2	1	0
2	e	a	c	b	d	0	4	3	1	2
3	c	d	e	a	b	3	2	1	0	4
4	d	e	b	c	a	4	3	0	2	1
5	e	b	a	d	c	1	4	2	3	0
Total						12	16	8	7	7

Note: The left columns of this table again show each voter's preference-ranking, whilst the right-hand columns translate this into point scores. With five options ($n = 5$) the first choice of each voter is assigned four points, the second-choice three points and so on.

however, a problem here which Condorcet himself recognized and that has preoccupied social choice theorists ever since. In certain situations, the preferences of voters can be such that whilst one option is always majority-preferred to another, no one option is majority-preferred to *all* the others. This is the so-called paradox of voting (not to be confused with the paradox of not voting discussed in Box 2.1). Table 4.3 shows the preferences of three voters (1–3) over three options (a–c). Pair-wise comparisons reveal that a is majority-preferred to b (by virtue of the support of the first and third voters), that b is majority-preferred to c (by virtue of the support of the first and second voters) but that c is majority-preferred to a (by virtue of the second and third voters). There is therefore a ‘cycle’ such that $a > b$ and $b > c$ but $c > a$.

In the 1870s the existence of voting cycles was independently rediscovered by an Oxford mathematician, Charles Dodgson, better known as Lewis Carroll, the author of *Alice's Adventures in Wonderland*. Yet although he apparently ‘felt sure that . . . the paradox of voting was known’, Arrow (1951: 93) was unaware of Condorcet or Dodgson's work. One possible inspiration for his own argument can, however, be identified. In Chapter 2 we saw how Anthony Downs (1995: 197) regards Joseph Schumpeter's (1942) *Capitalism, Socialism and Democracy* as providing the ‘foundation’ for *An Economic Theory of Democracy*. Schumpeter argues that most voters have very little

Table 4.3 *The paradox of voting*

Voters	Preferences		
	1st	2nd	3rd
1	a	b	c
2	b	c	a
3	c	a	b

knowledge about or interest in politics, that they are prone to irrational prejudices and impulses, and that they are susceptible to capture by special interest groups. The notion of there being a settled and reasonable public will which it is the duty of politicians to discern and respect is, he therefore argues, nonsense:

There is no such thing as a uniquely determined common good that all people could agree on . . . this is due not primarily to the fact that some people may want things other than the common good but to the much more fundamental fact that to different individuals and groups the common good is bound to mean different things. (Schumpeter, 1942: 251)

Having previously been Austria's Minister of Finance during a period of hyperinflation and the President of a bank which subsequently collapsed, Schumpeter left Austria for Harvard University in 1932 where he went on to establish himself as one of America's leading economists. This does not necessarily mean that Arrow would have encountered Schumpeter's work as an undergraduate student. There is, however, a closer connection between the two. Arrow was Downs' doctoral supervisor. Although it was another professor at Stanford, Julius Margolis, who initially suggested to Downs that he look at *Capitalism, Socialism and Democracy*, Arrow's willingness to act as Downs' supervisor suggests that he may have already had some basic knowledge of Schumpeter's arguments. Either way, Arrow's *Social Choice and Individual Values* can be interpreted as providing a more detailed account than that offered by Schumpeter of the mechanisms of preference aggregation, and thereby an explanation of why there can be no such thing as a uniquely determined common good.

Arrow: social choice and individual values

Kenneth Arrow (1921–) was educated in New York and has spent most of his working life at Stanford University. Awarded the Nobel Prize in 1972, Arrow has worked on general equilibrium theory and the economics of uncertainty, risk-taking, teamwork and the environment, as well as social choice theory. Arrow wrote *Social Choice and Individual Values* as his doctoral thesis following a brief spell working at the Rand Corporation in the late 1940s. Economists and mathematicians at Rand were, at this time, pioneering the use of game theory to analyse international relations. When applied in this way, game theorists assume that it is possible to talk about the pay-offs or utility accruing to countries from ‘playing’ different strategies. Given the commitment made to methodological individualism within rational choice in general and game theory in particular, the utility being invoked here can only refer to the combined utility of the individual citizens of those countries. But how can individual preferences be aggregated in such a way that we might talk about the utility of the citizens of a country? The conclusion Arrow reached is that it may not be possible to do so:

For *any* method of deriving social choices by aggregating individual preference patterns which satisfies certain natural conditions, it is possible to find individual preference patterns which give rise to a social choice pattern which is not a linear [or transitive] ordering. (Arrow, 1950: 7; original emphasis)

This finding, which has subsequently become known as the ‘impossibility’ theorem, has been interpreted as showing that ‘majority rule is fatally flawed’ (Wolff, 1970: 59) and that ‘strict democracy is impossible’ (Runciman, 1963: 133).

Arrow (1951: 51) constructs his argument by identifying a number of ‘unanimously acceptable’ canons of democratic fairness, listed below, which any reasonable method of aggregating preferences must, he argues, satisfy. He goes on to show, given the existence of a particular set of preference-rankings (or profiles), that no possible method of aggregating preferences can simultaneously satisfy all these principles:

- 1 *Unrestricted domain or ‘free triple’*. Assume that there are three options (a–c) between which voters must choose. The condition of unrestricted domain simply requires that individuals should be free to rank these options in any order they want.

- 2 *Transitivity or 'linearity'*. Transitivity requires that the social choice be consistent. Consistency requires that if there are three options ($a > c$) and $a > b$ and $b > c$ that $a > c$.
- 3 *Connectivity or decisiveness*. This condition simply requires that when comparing options, one option is either preferred to the other or that those making the choice are indifferent between them.
- 4 *Independence of irrelevant alternatives*. As it was initially presented by Arrow, this condition requires that the social choice between a set of options, a , b and c , is not affected by the existence of or changes in preferences over other infeasible and so irrelevant alternatives outside of the choice set. This condition, Arrow (1951: 93) argues, precludes any attempts to make interpersonal comparisons of utility (Box 4.1).
- 5 *Citizens' sovereignty*. This condition requires that an option be the social choice because of the preferences of those making the choice. This means that if there are, for example, three individuals and all three rank the available options $a > b > c$ that b and c should not be the social choice.
- 6 *Non-dictatorship*. This condition requires that there is no individual whose preferences are automatically the social choice independent of the preferences of all other individuals.

The crucial point to grasp in understanding the nature and significance of Arrow's impossibility theorem is that it is really just a generalization of the paradox of voting discovered by Condorcet (Riker, 1982a: 16; Weale, 1999: 139; Mackie, 2003: 37; Arrow, 1967: 227). What Arrow shows is that *if* individuals' preferences are such that there is a cycle of the sort shown in Table 3.3 then 'no method of voting' will generate a social choice satisfying all six conditions. To see this assume that three voters have the following preference-schedule (for a formal proof of the theorem see Abrams, 1980: 53–60 or Sen, 1970: 41–6).

Voter 1	$a > b > c$
Voter 2	$b > c > a$
Voter 3	$c > a > b$

What ought to be the social choice here? We cannot simply declare that the preference-ranking of the third voter is, for whatever reason, impermissible and ought to be changed to read $b > a > c$. Doing this would make b the obvious candidate to be the social choice but would violate the *first* condition of unrestricted domain. Neither can we

Box 4.1 Interpersonal comparisons of utility

Assume that there is just one person, Ben, and two goods, x and y . How can we determine whether Ben derives more utility from x than from y ? If Ben is given a choice between x and y and chooses x we can infer that he has 'revealed' a preference for x and so expects to derive more utility from its consumption. But can we know how much more utility? At this point, we could simply invite Ben to reflect upon the strength of his preference for x over y . Alternatively, we could rig the choice between x and y in such a way that it revealed something about his preferences. Assume, for example, that we give Ben the choice between getting y with absolute certainty or a 50 per cent chance of getting x and a 50 per cent chance of getting nothing. If Ben chooses x we can infer that he expects to derive at least twice as much utility from x . In this way, we can, in principle at least, derive a cardinal rather than ordinal preference-ranking for Ben.

Assume now that there are two people, Alice and Ben, and only one good, x . How can we tell whether Ben or Alice will derive more utility from consuming x ? In *An Essay on the Nature and Significance of Economic Science*, Lionel Robbins argues that there is no rigorous, scientific way of making these kind of interpersonal comparisons of utility. 'There is no means of testing the magnitude of [Alice's] satisfactions compared' with [Ben's] and so 'no way of comparing the satisfactions of different people' (Robbins, 1935: 124). There are two problems involved in making interpersonal comparisons. (1) We cannot see inside other people's minds and read their thoughts in a way that would allow us to directly compare utility streams. We can, Robbins (1932: 139) observes, test people's bloodstream and we can now measure endorphins and record the firing of neurons within the brain. But these do not provide us with the direct measure of utility necessary to show that Alice derives more satisfaction from consuming x than Ben. (2) We cannot rig the choice between Alice and Ben in such a way that their behaviour reveals information about their utility. We might find that Alice is prepared to spend £10 on x whilst Ben is only prepared to spend £5, or that Alice is prepared to queue for two hours to get x and Ben only one. But we cannot infer from this that Alice derives twice as much utility from x because we cannot know that Alice and Ben place an equal value upon particular amounts of money or particular lengths of time spent queuing (for more details see Elster and Roemer, 1991).

Much to his apparent surprise, this argument about the impossibility of making interpersonal comparisons soon became economic orthodoxy (Robbins, 1971: 147–9). But Robbins' argument remains controversial. Some economists and many ordinary people would argue that it is a matter of 'plain common sense' (Cole, 1936: 149) that we can and do use language as a guide to making interpersonal comparisons of utility. Imagine, when asked, Alice were to say that she 'really wanted' x and Ben that he was 'not all that bothered'. Could we not take this to indicate something about the intensity of their preferences?

simply declare that $a > b$ (by virtue of the preferences of the first and third voters), $b > c$ (by virtue of the preferences of the first and second voters) and that $c > a$ (by virtue of the preferences of the second and third voters) because this would violate the *second* condition of transitivity. One way in which we might escape this cycle is by declaring that whilst $a > b$ and $b > c$ that no judgement can be reached about the relationship between a and c . This would however mean breaking the *third* condition of decisiveness.

Another way in which we might try to break the cycle is by asking voters to state their preferences over a fourth and hypothetical option in order to try and gauge the strength of their preferences over a , b and c . This would however violate the *fourth* requirement that the social choice not be affected by the existence of infeasible and so irrelevant alternatives. On the grounds that it was more just than the others or that it would better preserve the environment and so protect the intrinsic value of nature, we might simply declare that b ought to be the social choice. But this would be inconsistent with rational choice theory's commitment to political individualism and to the *fifth* condition of citizen's sovereignty. Finally, and perhaps most obviously, we could simply declare that one person ought to be given the exclusive right to determine the social choice. This would however violate the *sixth* condition of non-dictatorship.

Riker: liberalism against populism

Although Arrow's work on social choice theory was lauded by economists, it was, initially at least, largely ignored by most political scientists and philosophers. This is no doubt partly because Arrow's presentation in *Social Choice and Individual Values* makes relatively few concessions to non-mathematicians. It is also because Arrow, who devoted himself almost exclusively to the study of general equilibrium theory in the years following the publication of his thesis, made little effort to relate his argument to existing debates about the nature and limitations of democracy (but see Arrow, 1967). One of the few political scientists who immediately recognized the importance of Arrow's work was, however, William Riker (1958, 1961, 1965) who, in *Liberalism Against Populism* (1982a), eventually succeeded in establishing the significance of Arrow's work for a wider social science audience.

The first few chapters of *Liberalism against Populism* carefully

document the perversities of a series of voting methods including plurality voting, proportional representation and the Borda count. The next few chapters then use Arrow's theorem to generalize these findings and show that *any* method of voting is flawed. But it would be a mistake to regard Riker as *simply* popularizing Arrow's work. For in two important respects, Riker's argument actually differs from that offered by Arrow. In the first place, Riker is at pains to emphasize the practical significance of social choice theory. Arrow's work constitutes a theorem rather than a theory. It seeks to show that *if* voters have a particular set of preferences it will not be possible to generate a social choice without violating one of the previously listed conditions. Arrow does not attempt to demonstrate that any actual set of voters have or have had these preferences. On the basis of a set of detailed case-studies in which he reconstructs the preference-rankings of assorted politicians and voters, Riker claims that the cycles which give rise to the paradox of voting are actually quite common and that they disfigure democratic politics (Riker, 1982a: 197–202; Riker and Weingest, 1988).

The existence of voting cycles means that elections often generate intransitive results. This, in turn, means that elections 'fail to make sense' because they result in the selection of candidates or policies to which there are majority-preferred alternatives (Riker, 1982a: 115). How do we know this? Arrow's theorem tells us that when there is a voting cycle one or more of the previously listed conditions have been broken in the process of aggregating preferences. It would not appear to be the case that the conditions of unrestricted domain, citizen's sovereignty or non-dictatorship are being routinely broken. The problem, Riker concludes, must therefore be that elections are generating intransitive results. The argument at this point may still seem a little fanciful. We do not, after all, regularly encounter newspaper reports that in some election the socialists were majority-preferred to the centre party, the centre party to the conservatives and the conservatives to the socialists. But, as Riker emphasizes, this is only because we do not usually test whether the winner of an election *is* majority-preferred to *all* the other alternatives. We cannot conclude that intransitives do not exist because we do not look for them. Furthermore, and because we do not know which election results would, if we checked, generate intransitive results, we cannot have confidence in the results of *any* election.

Riker's argument differs from Arrow's in a second way. Arrow simply looks at the problem of preference aggregation posed by voting cycles. Riker, however, wants to show how self-interested political

actors can exploit those cycles through a mixture of agenda control, strategic manipulation and heresthetics in order to achieve their preferred outcomes.

Agenda control

In most democratic bodies, whether they are committees, legislatures or executive cabinets, one person is usually given control of the agenda. Political scientists have previously recognized that this person may be able to secure their preferred outcome by excluding certain options from formal consideration (Lukes, 1974; Barach and Baratz, 1970). Riker (1982a: 169–92) shows that the agenda-setter may also be able to secure their preferred outcome by determining the *sequence* in which options are considered. Assume that there are four options (w–z) and three political parties (1–3) with the following preferences:

Party 1 $w > x > y > z$

Party 2 $x > y > z > w$

Party 3 $y > z > w > x$

There is a cycle here such that $z > w$, $w > x$, and $x > y$ but $y > z$. But assume that the leader of the third party controls the agenda. They can arrange for an initial contest between x and w (which w will win), then one between w and y (which y will win) and, finally, one between y and z (which y will win). In doing so, they can secure the eventual triumph of their preferred option.

Strategic manipulation

Drawing on the work of Allan Gibbard (1973) and Mark Satterthwaite (1975), Riker (1982a: 137–62) demonstrates that any method of voting is vulnerable to strategic manipulation by voters who, by misrepresenting their preferences, can try to secure their preferred outcome. To see what this might entail, look again at the preference-rankings of the three parties above. If the leader of the first party can spot what it is that the leader of the third party is trying to achieve in sequencing the votes in a particular way, they can thwart their ambitions by voting strategically for x during the initial contest between x and w, so ensuring the victory of x. During the subsequent contests between x and y and x and z, x will again triumph. In this way, the leader of the second party can secure their second rather than, as would otherwise be the case, third choice.

Heresthetics

At times, the preferences voters have are such that there will be a stable equilibrium manifesting itself in a clear and enduring majority for one particular party. Such equilibria are, however, extremely fragile (Riker 1982a: 136–9; 1984, 1986, 1996). By either reframing or reigniting a previously dormant policy issue, politicians can undermine existing equilibrium by introducing new issue dimensions. In Chapter 2 we saw how parties must sometimes compete in a multi-dimensional setting and how this can engender instability. At that time, the existence and number of dimensions was treated as being exogenous to the process of competition itself. Riker shows why parties sometimes compete *by* trying to create new issue dimensions. In the case of, for example, the American Civil War, Riker argues that the Republicans, led by Lincoln, were able to overcome their political isolation by introducing a new and previously dormant issue, slavery, that split the existing and winning coalition between the north-western states that were against the admission of new slave states to the union and the south, which argued that this was a matter for the states themselves.

Democracy is supposed to embody a certain notion of political equality; every person has one vote and that vote is supposed to count equally. Riker (1982a: 200–1) argues that the existence of agenda-setting, strategic manipulation and heresthetics shows that this equality is a chimera:

The absence of political equilibria means that outcomes depend not simply on participants' values and constitutional structures, but also on matters such as whether some people have the will or the wit to vote strategically, whether some leader has the skill, energy, and resources to manipulate the agenda, or whether some backbencher – in a committee or out – has the imagination and determination to generate a cyclical majority by introducing new alternatives and new issues. These are matters of perception and personality and understanding and character.

Such is the ferocity of Riker's denunciation it might seem that he must be opposed to democracy itself. This is not, however, the case. Riker distinguishes between what he calls a 'populist' and a 'liberal' theory of democracy. The populist theory, which he associates (rather unfairly) with Rousseau as a political theorist and Britain as a country, interprets democracy as requiring the translation of the public will into public

policy. The liberal theory, which he associates with Madison, is understood as requiring, firstly, that voters be given the opportunity to remove from office an incumbent government which has offended their sensibilities, and, secondly, the existence of constitutional checks and balances such as a bill of rights, the separation of powers, federalism, a multicameral legislature and fixed terms of office, limiting the power of the executive.

Social choice theory shows that the populist theory of democracy is flawed 'not because it is morally wrong, but because it is empty' (Riker, 1982a: 236). There is no reliable way in which voters' preferences can be aggregated and because any election is vulnerable to strategic manipulation, we simply cannot equate democratic rule with the translation of the public will into public policy. The liberal theory of democracy is not however compromised in the same way. Because instead of demanding that a government embody the public will, it requires only that it be possible for voters to remove a government from office (Riker, 1982a: 243). Furthermore, the constitutional constraints liberals demand can actually be justified in terms of the demonstration that incumbent governments may not represent the popular will and so should not be allowed to govern as 'elective dictatorships' (Hailsham, 1978).

Reining-in social choice theory

In the previous sections I have shown why social choice theorists' arguments about democracy deserve to be taken seriously. In this section, however, I will seek reasons to temper Arrow and Riker's pessimism. I start here by identifying possible objections to two of Arrow's 'unanimously acceptable' conditions, and then critically examine Riker's claim that voting cycles are a common feature of political life before reassessing the implications of social choice theory not only for the 'liberal' theory of democracy but for the market.

Transitivity

It may well be reasonable to require that rational individuals have transitive preferences. It is less clear that it is always reasonable to require of a method of voting that it generate transitive results. Consider the following example offered by Fishburn (1970). There are 21 voters whose preferences over three candidates (x - z) are as follows:

Voters 1–10	$x > z > y$
Voters 11–20	$y > x > z$
Voter 21	$z > x = y$

Which candidate should be declared to be the winner? There is an intuitively obvious case here for declaring that x ought to be the winner. For whilst x and y are each the first choice of ten voters, x is also the second choice of 10 voters. If we were to conduct a Borda count here, x would be the clear winner. Making a series of pair wise comparisons, we can see that $x > z$ (by 20 votes to 1) and $z > y$ (by 11 votes to 10). By extension we might therefore expect that $x > y$. But this is not actually the case as x and y are tied (10 votes each). There is a further complication here. If y and x are equal, this would imply that they could be substituted for each other without it making any difference to the other comparisons. Because it is the case that $x > z$, it should therefore also be the case that $y > z$. Yet z is actually majority-preferred to y (by 11 votes to 10).

The lesson Arrow would draw here is that it is not possible to identify a meaningful and fair social choice from this preference profile. But there are, as I have already said, good reasons for regarding x as being a reasonable social choice. To therefore require by definitional fiat that a candidate needs to defeat every other candidate in a pair-wise comparison so as to ensure a transitive social ordering may be thought arbitrary. Riker (1982a: 100) states that when ‘an alternative opposed by a majority wins, quite clearly the votes of some people are not being counted the same as other people’. But whilst it is certainly unfortunate in this instance that x cannot defeat y , it is simply not true that if x were declared the winner on the basis of a previously-agreed constitutional rule that second preferences ought to be taken into consideration, that some people’s votes would have been treated differently.

Independence of irrelevant alternatives

The requirement that a social choice be made independently of irrelevant alternatives has proven to be the most controversial of Arrow’s conditions. As it was previously defined, the independence of irrelevant alternatives means that the social choice ought not to be affected by the existence of or changes in voters’ preferences over other infeasible options outside of the choice set. By way of an illustration, Arrow invites us to imagine a city whose inhabitants are asked to choose between various alternative transport systems: rapid transit, underground, roads,

buses and so on. What, he asks, if someone suggests that the inhabitants ought to be canvassed about a system which would, at the touch of the button, dissolve them into molecules and instantly reform them elsewhere in the city? The independence of irrelevant alternatives means that 'such preferences ought to have no bearing upon the choice to be made' (Arrow, 1967: 226).

This example is so far-fetched it is tempting to think no more about the argument it is defending. Yet as Gerry Mackie (2003: 133) shows, it may sometimes make good sense to take preferences over infeasible options into account. Suppose a reception is to be held and the caterers will only provide one drink, either beer or coffee. To save time, the organizer copies a form from the previous year's event which asks people to rank their preferences over beer, coffee, water, tea, milk and fruit juice. Assume that only two families reply and that they indicate the following preferences:

Family 1 (5 people)	beer > coffee > water > tea > milk > fruit juice
Family 2 (4 people)	coffee > beer > water > tea > milk > fruit juice

Given the caterer's requirements, there are only two feasible (relevant) alternatives and beer is majority-preferred to coffee. Assume now that at the last moment the second family pulls out and a third family with the following preferences decides to attend in its place:

Family 3 (4 people)	coffee > water > tea > milk > fruit juice > beer
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What should the organizer now do? In terms of the simple pair-wise comparison, beer is still majority-preferred to coffee and so nothing has therefore changed. If the other infeasible alternatives are to be considered as simply irrelevant, the organizer will have to choose beer. But surely it is relevant that the third family rank beer last? Now we need to be careful here. The difficulties involved in making interpersonal comparisons of utility are such that we cannot necessarily assume that the members of the third family derive less utility from the consumption of beer than the first family simply because they rank it lower. It may simply be that the members of the third family derive exceptional amounts of utility from all the other drinks. But given the limited amount of information available, there is nevertheless a good case for making coffee the social choice. Consider what would happen if we were to conduct a Borda count here. There are six options ($n = 6$), so five points should be awarded to the first-ranked option, four points

to the second and so on. Beer is the first-ranked option of five people ($5 \times 5 = 25$) and the last-ranked option of 4 ($4 \times 0 = 0$) and so scores 25 points. Coffee is the first-ranked option of four people ($4 \times 5 = 20$) and the second-ranked option of five ($5 \times 4 = 20$) and so scores 40 points.

There is a further problem with this condition. The way in which Arrow defines the independence of irrelevant alternatives is very different from the way in which he actually uses it in practice. In theory, the condition is supposed to exclude consideration of options outside the actual choice set. In practice, Arrow uses the condition to ensure that a social choice is made exclusively on the basis of pair-wise comparisons between the options *within* the choice set. As Mackie (2003: 137) observes, the independence condition 'would be better named the pair-wise comparison condition, as it requires that choices among several alternatives be carried out only with information about choices between pairs'. This is important because the reliance upon pair-wise comparisons precludes the use of 'positional' methods of counting votes like the single transferable vote or the Borda count.

The Borda count is not an infallible method of aggregating preferences. As Condorcet first recognized, it sometimes fails to select the majority-preferred alternative. But a great deal of comparative research by social choice theorists into the relative merits of different methods of voting has shown that the Borda count most frequently delivers fair and defensible election results (Dummett, 1998; Saari, 2000). In particular, and given the sort of preference-profile which sustains the paradox of voting, the Borda count has the great advantage of reporting a tied result rather than an intransitive cycle. This is important because there is, in principle, no difficulty in dealing with tied results by agreeing, at a prior constitutional stage, to flip a coin or giving a casting vote to the speaker or longest-serving member.

The frequency of cycles

Riker argues that voting cycles are quite common and that they disfigure democratic politics. Yet the available evidence here suggests that although cycles do sometimes occur, they are actually quite rare. We can start here by assuming that voters' preferences are random in the sense that people are as likely to rank any given set of options in one way as they are in any other. The proportion of possible preference-profiles resulting in cycles can then be calculated for any number of options and voters. The results are shown in Table 4.4. The first point to note here is that when the number of options and the number of

Table 4.4 *Proportion of all possible profiles displaying the paradox of voting*

Number of options	Number of voters				
	3	5	7	9	11
3	.056	.069	.075	.078	.080
4	.111	.139	.150	.156	.160
5	.160	.20	.215		
6	.202				

Source: Data from Riker (1982a), *Liberalism Against Populism*, p. 122.

voters increase, cycles become more likely. The second point to note is that even when the number of options is quite low that there is a significant chance of cycles arising. If there are 4 options and 11 voters, cycles will arise 16 per cent of the time (.160).

The assumption employed here that any one preference-profile is as likely as any other may not, however, be a good one to make. Imagine now that there are three parties: a left-wing party (lw), a right-wing party (rw) and a centre party (ce). If voters have as their first-choice the party 'closest' to them in political space and as their last-choice the party furthest away from them, they will either rank the parties:

- (i) $rw > ce > lw$,
- (ii) $lw > ce > rw$,
- (iii) $ce > lw > rw$, or
- (iv) $ce > rw > lw$.

Nobody will rank the parties:

- (v) $rw > lw > ce$, or
- (vi) $lw > rw > ce$,

for if spatial proximity is what counts how could a person who most-preferred the right-wing party prefer the left-wing party to the centre party? This is significant because when voters agree in this way about the criteria by which to rank options, cycles and the paradox of voting cannot arise. A cycle would arise if, for example, the three voters ranked the three parties in the following way:

Voter 1	$lw > ce > rw$
Voter 2	$rw > lw > ce$
Voter 3	$ce > rw > lw$

Here, the left-wing party is majority-preferred to the centre party (by virtue of the first and second voters) and the centre party is majority-preferred to the right-wing party (by virtue of the first and third voters) but the right-wing party is majority-preferred to the left-wing party (by virtue of the second and third voters). But if voters judge parties in terms of spatial proximity, the second voter could not have the preference-ranking attributed to them here because if they most prefer the right-wing party they must prefer the centre party to the left-wing one. Assume that this voter were to instead rank the parties $rw > ce > lw$. In this case, the right-wing party would be majority-preferred to both the left-wing party and the centre party and no cycle could exist.

Of course it is implausible to assume that *every* voter will employ the same criteria in judging candidates or policies. Yet when even a minority of voters agree upon the criteria, the chances of a cycle arising dramatically fall (Niemi, 1969, 1983). There are two important and practical lessons to be drawn from this. The first is that democracy may best work in those situations where voters already share a common political culture: a point made many decades ago by behaviouralists like Gabriel Almond (1963). Attempts to export democracy to either supra-national bodies like the European Union where there is currently no shared political culture or to countries where there are multiple cleavages and little agreement about which of these cleavages are the most significant, may simply generate intransitive results. The second is that democracy might work best where democratic institutions encourage deliberation amongst participants prior to voting and in which there are therefore more opportunities to agree upon the criteria by which issues ought to be judged (Box 4.2).

As I have already noted, Riker (1982a, 1986) illustrates and defends his claim that voting cycles are extremely common by way of a series of historical case-studies. These include the American Civil War, the introduction of a school-construction bill in the US House of Representatives in 1956, the adoption of the Seventeenth Amendment to the US Constitution (on the direct election of senators), the trial of the servants believed to have killed Afranius Dexter in about 100 AD and C.P. Snow's fictional account of a Cambridge University college election in *The Masters*. Yet as Mackie (2003: 197–309) demonstrates, these accounts depend upon contestable interpretations of politicians'

Box 4.2 Deliberation and social choice

In recent years the theory and practice of democracy is said to have taken a 'deliberative turn' (Dryzek and Braithwaite, 2000: 241). Deliberative democrats argue that legitimate decision-making requires not simply the aggregation of preferences but a period of careful reflection upon and debate about those preferences prior to voting. During this period of deliberation, participants, it is argued, should not simply assert their own claims and viewpoints; they ought instead to frame their arguments in terms of common interests whilst responding to the force of the better argument. Such theoretical arguments have inspired interest in and the greater use of 'deliberative' opinion polls (Fishkin, 1991; Luskin, Fishkin and Jowell, 2002) and 'Citizen's Juries' (Crosby *et al.*, 1986). They have also led political scientists to extol mechanisms which facilitate deliberation within existing legislatures (Sunstein, 1993; Uhr, 1998; Steiner *et al.*, 2004).

Drawing upon this literature, some theorists have argued that deliberation may ameliorate some of the problems associated with aggregating preferences identified by social choice theorists (Miller, 1992; List and Pettit, 2002; Dryzek and List, 2003). The claim most often made here is that deliberation may increase 'structuration': that is the degree to which individual preferences are aligned along the same shared set of underlying dimensions. This is important because increased structuration reduces the chances that voters' preferences will generate a cycle. Deliberation may increase preference structuration in two main ways (Farrar *et al.*, 2003). Firstly, as people talk and learn from each other, they may come to adopt criteria for judging alternatives that they recognize it is conventional to use. Secondly, through careful deliberation they may influence each other's thinking and acquire more of a shared understanding of what an issue involves.

Deliberation may assist decision-making in a number of other ways. (1) As we have seen, the chances of a cycle occurring are positively related to the number of issue alternatives. A process of public deliberation may make it extremely difficult for participants to defend proposals that are obviously intended to serve their self-interest (Elster, 1998). In this way, deliberation may lower the total number of issue alternatives to eventually be voted upon. (2) Deliberation gives participants an opportunity to examine and challenge the arguments and motives of those with opposing views. It may therefore make it easier to expose those who are strategically misrepresenting their preferences in an attempt to secure a preferred outcome. (3) Deliberation gives participants an opportunity not only to state their case but to express the intensity of their preferences over an issue. It therefore offers those making a decision an alternative to simply counting equal votes.

preference-rankings and ignore alternative and usually more obvious explanations of the same event. Furthermore, and even if we accept that these accounts do actually illustrate cases of voting cycles, agenda-control, strategic manipulation and heresthetics, it is unclear how representative they are. The very obscurity of at least some of Riker's stories suggests not only that he is extremely erudite but that he had to search long and hard for some of his examples.

In recent years, social choice theorists have searched for the existence of voting cycles in, for example, Presidential elections (Niemi and Wright, 1987), Dutch Parliamentary elections (Van Deemen and Vergunst, 1988), and legislatures (Stratmann, 1997). The results uniformly indicate that voting cycles are actually extremely rare (Feld and Grofman, 1986; Krehbiel and Rivers, 1990). One possible explanation of this is, as we have seen, that whilst voters and legislatures have different preferences many of them nevertheless use the same criteria to judge alternatives. In their study of Congressional voting, for example, Keith Poole and Howard Rosenthal (1997: 227) show that 85 per cent of all the roll-call votes held between 1789 and 1995 can be accounted for in terms of just two dimensions, and that 'except for two [relatively] short periods in American history when race was prominent on the agenda, whenever voting could be captured by the spatial model, a one-dimensional model does all the work'.

The liberal theory of democracy and markets

Riker interprets the findings of social choice theory as constituting an indictment of the 'populist' theory of democracy and a defence of its 'liberal' variant. Yet there are good reasons for believing that *if* social choice theory damns populism, it damns liberalism as well. It is an important part of the liberal theory that the prospect of having to fight and win future elections should encourage incumbent politicians to abide by their election promises and so refrain from pursuing their own interests in office. In this way, elections ensure that politicians' 'interests coincide with their duty' (Alexander Hamilton, *Federalist*, 72). But if, as Riker maintains, elections are essentially arbitrary, it is unclear what reason incumbent politicians have to pursue their constituents' interests. As Mackie (2003: 412) quotes a younger Riker (1953: 110) as observing

the process of government can be controlled by citizens only when elections are a transmission belt of ideas and decisions from the

Box 4.3 Pareto superiority and Pareto optimality

If we cannot make interpersonal comparisons of utility, can we say anything about the potential welfare attractiveness of different distributions? The Italian economist Vilfredo Pareto (1909) argues that we can. Suppose we compare two distributions and find that at least one person regards themselves as being better-off in the second distribution and none regard themselves as being worse-off. Without having to make any interpersonal comparison of utility, we can say that the second state is preferable, or Pareto-superior, to the first.

In the diagram opposite, Alice's utility from the consumption of x is measured along the horizontal and Ben's on the vertical axis. The curve $M-M'$ shows the maximum possible utility levels each can achieve given a fixed supply of the good. M shows that point where Ben consumes all of the good and M' that point at which Alice consumes all of the good.

The move from A to B is Pareto-superior because Alice and Ben are both better-off in B .

The move from A to C is also Pareto-superior because Alice is better-off in C and Ben no worse-off.

The move from A to D is Pareto-inferior because both are worse-off in D .

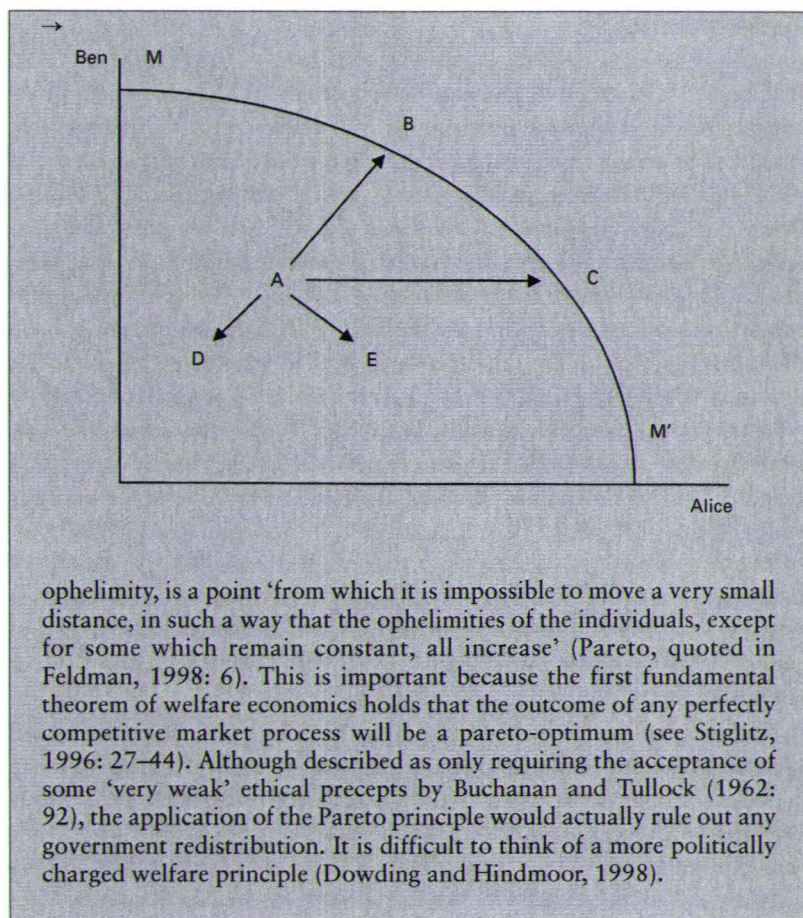
The move from A to E is Pareto-incomparable because Alice is better-off and Ben worse-off. It may well be that *total* utility at E is higher than it is at A but the impossibility of making interpersonal comparisons of utility is such that, Pareto argued, we cannot know. We simply cannot say anything about the relative attractiveness of A and E using the Pareto criterion.

We can also identify a set of Pareto-optimal points running from M to M' from which it is not possible to make any Pareto-superior moves. This point of Pareto optimality or, as he preferred, maximum

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voters to the rules. If elections have no relevance to public policy, then the policy makers need not respect the electoral sanction.

If democracy in both its populist and liberal variants is flawed, does this mean that market decision-making ought to be substituted for collective and democratic decision-making? This is the conclusion drawn by Charles Rowley (1993: xiii) who suggests that Arrow's theorem 'provides incontrovertible support for market processes and encouragement for those who seek . . . the minimal state'. Yet as Arrow (1997) has himself emphasized, the impossibility theorem applies as much to statements about the welfare implications of market decision-making as it does to democracy. It is often claimed



that competitive markets are valuable and ought to be promoted because they maximize consumer welfare. To take just one example, Adam Smith (1776, Vol. 1: 12) argues that the 'propensity to truck, barter and exchange' are inherent features in human nature and that individuals will be led, as if by an 'invisible hand', to promote the common good whilst pursuing their self-interest. Yet whilst it might still be possible to defend competitive markets as resulting in pareto-optimal distributions (Box 4.3), or as maximizing individual freedom, Arrow's theorem suggests that we cannot say whether markets maximize welfare. For how can we aggregate individual utility in such a way as to be able to then say that one outcome maximizes welfare but another does not?

Assessment

In Chapter 1, I suggested that rational choice theory has polarized political science and that its proponents and opponents are increasingly reluctant to engage with each other. This is particularly true of social choice theory. A growing number of social choice articles are now being published in journals like *Social Choice and Welfare*, but ever fewer of these articles end up being cited in what might be called mainstream political science journals. Indeed, half a century after the publication of *Social Choice and Individual Values*, many textbooks on democracy simply fail to mention Arrow's theorem (see Held, 1987; Hyland, 1995; Touraine, 1998). In this chapter I have tried to show why this is unfortunate. Social choice theory has important implications for democratic political theory; political scientists may have good reasons to doubt the claim that social choice theory shows democracy to be 'impossible', but this is a claim that they ought to address themselves to and use to sharpen their own definitions and discussions of democracy. As we have already seen, if democracy is understood to require not only the aggregation of preferences but deliberation and reflection about those preferences then the force of Arrow's argument is blunted.

Social choice theorists might also benefit from drawing more systematically on existing democratic theory in order to provide a context for their own work. Arrow and Riker have each been *interpreted* as arguing not only that all methods of voting are flawed, but that democracy itself is 'impossible'. This is an exaggeration. As we have seen, Arrow carefully avoids drawing too many implications from his work whilst Riker argues that social choice theory only poses problems for the 'populist' theory of democracy. It is also misleading. There is more to social choice theory than arguments about whether or not democracy is impossible (Box 4.4). The earlier discussion of the relative merits of the Borda method demonstrate that social choice theory has a potentially practical pay-off for those designing electoral systems. Yet it is the argument that democracy is impossible which inevitably grabs the academic headlines. Looked at in another way, this argument is, however, far from being original. As I observed at the very start of the chapter, theorists have for many centuries delighted in finding faults with democracy, but you do not have to believe that democracy is a perfect system of decision-making in order to believe that it is sometimes the most appropriate system. Winston Churchill once famously said that democracy 'is the worst form of Government,

Box 4.4 Liberalism and social choice

There is at least one other area of social choice theory worth drawing attention to here. Using the same nomenclature as Arrow, Amartya Sen (1970) argues that the liberal principle that people ought to be allowed to be decisive over particular social issues cannot be reconciled with the Pareto principle. Sen's argument and much of the subsequent literature revolves around the once controversial publication of D.H. Lawrence's *Lady Chatterley's Lover*. There are two people, A (the prude) and B (the lewd). Depending on whether or not A and B read the book there are four possible outcomes:

- 1 A and B read the book;
- 2 A reads the book and B does not read the book;
- 3 B reads the book and A does not read the book; or
- 4 Neither reads the book.

A has the following preference ordering: $4 > 2$ (A would rather that he have to read the book than see B wallow in its depravity) $> 3 > 1$.

B has the following preference ordering: $1 > 2$ (B would take pleasure from A having to read the book and from, perhaps, secretly enjoying it) $> 3 > 4$.

It is obvious from this preference-ranking that outcome 2 is Pareto-superior to outcome 3. Both A and B, that is, prefer an outcome in which A reads the book and B does not read the book to one in which B reads the book and A does not read the book. Yet, according to Sen, liberalism demands that both A and B be allowed to choose whether or not to read the book. In this case, this means that A should not read the book and B should read the book. Yet this outcome, 3, is Pareto-inferior to 2.

Sen's 'liberal paradox' has generated a great deal of discussion and argument (Buchanan, 1996; or Sen, 1976, for an early review). The most powerful rejoinder to Sen is, however, that offered by Brian Barry (1989: 81). He argues that Sen simply misconstrues the requirements of liberalism. 'Liberal principles do not say in a context like the *Lady Chatterley* case who should read what; rather, liberalism is a doctrine about who should have a right to decide who reads what'. If the prude freely chooses to read the book and the lewd chooses not to – perhaps as part of a pareto-efficient deal between them – the notion that liberalism has been violated is, Barry concludes, 'pure fantasy'.

except for all those other forms of Government which have been tried'. As a one-line riposte to Riker's (1982a) 300-page book this takes some beating.

Mancur Olson and the Logic of Collective Action

Overview: Individuals must sometimes act collectively in order to achieve their goals. The collective action problem, often known as the free-riding problem, arises when it is better for all the members of a group that they act collectively even though it is in nobody's individual interest to contribute to the provision of the collective good. Within rational choice theory, credit for the identification of the collective action problem is usually given to Mancur Olson whose doctoral thesis, *The Logic of Collective Action*, was first published in 1965. In what has become an emblematic statement of the collective action problem, Olson (1965: 2) suggests that 'unless the number of individuals is quite small, or there is coercion or some other special device to make individuals act in their common interest, rational, self-interested, individuals will not act to achieve their common or group interests'. In this chapter I start by describing the collective action problem and show how it can be analysed using game theory. Olson is often interpreted as arguing that free-riding renders collective action impossible or irrational. This is simply not the case. Olson argues that groups face a collective action *problem* but recognizes that they may be able to overcome it.

Olson's The Logic of Collective Action

The order of the sections in this chapter is slightly different. I start by looking at the key text, Olson's *The Logic of Collective Action*. Collective action is necessary when a group of people can or must work together in order to achieve some goal. Olson (1965: 1), who was a Professor at the University of Maryland from 1968 until his death in 1998, opens *The Logic* by observing that 'it is often taken for granted . . . that individuals with common interests usually attempt to further those common interests'. Yet, as he shows, this is not always the case. In the case of 'public' or 'common goods, the benefits of which are non-excludable (see Box 5.1), collective action is compromised, sometimes fatally, by the existence of a collective action problem. Faced with the

Box 5.1 Excludability: public goods and common goods

Economists often classify goods in terms of (i) their 'excludability', and (ii) their 'rivalness' (Sandler, 1992: 5–8). A good can be described as being excludable if its owner can prevent its consumption benefiting anyone else. A good can be described as being non-excludable if the benefits deriving from its consumption are available to all. To use a standard example, the beam of light emitted by a lighthouse is non-excludable because any passing ship can potentially benefit from it. In most cases excludability is a matter of cost. In principle most goods can be rendered excludable. If they wanted to, the owners of a lighthouse could arrange for a series of ships carrying giant black-out screens to sail directly in front of any boat which had not paid to use the lighthouse beam. But this would obviously cost the owner more than they could hope to charge for their services. A good can be described as being rivalrous when its consumption by one person reduces the amount available to others. A good can be described as being non-rivalrous to the extent that consumption by one person does not reduce the amount available to others. A television signal is non-rivalrous because the quality of the signal one person receives is unaffected by the number of other people receiving it.

This two-way classification generates four possible types of goods. (1) Public goods like defence which are both non-excludable and non-rivalrous. (2) Common or 'pool' goods like fishing grounds which are non-excludable to the extent that it is very difficult to stop boats exploiting them but which are rivalrous in the obvious sense that the fish caught in one boat cannot then be caught in another. It is a common feature of such goods that they are, up to some point, naturally self-sustaining. Fishermen are able to catch a certain number of fish each year without reducing the overall size of the population. Yet beyond a certain level of consumption, common goods become degraded and eventually destroyed. (3) Toll goods like, as their name suggests, toll roads or bridges, which are excludable but non-rivalrous. (4) Private goods like chocolate bars which are both excludable and rivalrous.

In *The Logic of Collective Action* Olson suggests that the collective action problem afflicts the provision of public goods. Yet he defines public goods solely in terms of their excludability. 'A public good is here defined as any good such that, if any person X_i in a group $X_1 \dots, X_p \dots, X_n$ consumes it, it cannot feasibly be withheld from the others in that group. In other words, those who do not purchase or pay for any of the public or collective good cannot be excluded or kept from sharing in the consumption of the good' (Olson, 1965: 12). To the extent that public goods are usually defined in terms of their non-excludability and non-rivalrous, this suggests that the collective action problem affects the provision of both public goods and common goods.

choice of whether or not to contribute to the provision of a collective good, each individual may well reason that their contribution will make little, if any, difference to the overall amount of the good provided and that by free riding they can benefit from the contributions made by others:

Any group or organization, large or small, works for some collective benefit that by its very nature will benefit all of the members of that group in question. Though all of the members of a group therefore have a common interest in obtaining this collective benefit, they have no common interest in paying the cost of providing that collective good. Each would prefer that the others pay the entire cost, and ordinarily would get any benefit provided whether he had borne part of the cost or not. (Olson, 1965: 21)

The danger here is of course that if everyone attempts to free ride that there will be no collective action.

As examples of the collective action problem, consider the following:

- All the workers in a factory may benefit from the creation of a union which can bargain on their behalf. But if, as is usually the case, workers benefit from pay rises whether or not they belong to the union, it may not be in the interest of any one worker to pay their union dues.
- Marxists traditionally assume that a revolution will somehow simply happen when the objective economic conditions are right (see Elster, 1985: 437–46). Yet even *if* the working-class believe that they would be better-off in a communist system, it does not necessarily follow that it would be in the interest of any one worker to become a revolutionary. Revolutions are both difficult and dangerous; why would any one person risk their neck on the barricades when they could stay at home and free ride?
- Pluralists like David Truman (1951) and Arthur Bentley (1949) argue that pressure groups represent and are representative of the public's views on policy issues. This claim rests upon the assumption that every set of people who share some interest will form a pressure group to pursue that interest. Pointing to the existence of the collective action problem, Olson (1965: 165) argues that 'latent' groups like migrant workers may not form a group even though they have 'vital common interests'.

- The concentration of carbon dioxide in the atmosphere has increased by 30 per cent since pre-industrial times (IPCC, 2001: 31), and around 80 per cent of this increase has been caused by the combustion of oil, gas and coal. If emissions of carbon dioxide continue to rise then global temperatures might climb by as much as 8 degrees centigrade by 2100 (see Lomborg, 1998: 258–324 for a critical discussion). Any such increase would significantly affect the quality of human life across the planet; yet even if it is in every country's interest that overall emissions of carbon dioxide are reduced, it may not be in any one country's interest to reduce *their* emissions as doing so would retard national economic growth.
- 'Realists' argue that in an anarchical international system, states confront a 'security dilemma' (Jervis, 1978; Glazer, 1997). In order to protect their economic, political and territorial integrity, states will want to arm themselves. Yet the more one state arms itself, the more reason other states then have to either accelerate their own rearmament or contemplate a preemptive attack. Yet even if it is in the interests of every country that every country disarms, it may not be in the interests of any one country to be the first to do so.

Olson's arguments about the existence of a collective action problem can be clarified using game theory (Box 5.2) and, more specifically, the prisoners' dilemma game. As it was originally formulated by Albert Tucker (Hargreaves Heap and Varoufakis, 1995: 146), the story behind this game runs as follows. Two hardened criminals, Jake and Keith, are suspected of having committed an armed robbery. They are arrested and placed in separate cells. The hard-bitten, cynical, stands-no-nonsense cop visits each in turn. He tells Jake that if he confesses to the robbery that he'll have a word with the judge and make sure that he, Jake, serves no more than one year, leaving Keith to serve the maximum four-year sentence. He also tells Jake that he'll put exactly the same deal to Keith and that if neither confess he has enough evidence to send them away for a two-year stretch and that if they both confess they'll each get three years. The cop then tells Jake he has ten minutes to decide what to do, throws his cigarette to the ground and leaves the cell. What should Jake do? He should reason as follows. No matter what Keith does he is better off confessing. If Keith confesses he will be better off confessing because he will get three years instead of four. If Keith does not confess he will be better off confessing because he will get one year instead of two. But Jake realises that Keith will be thinking in exactly the same way and that if they both confess that they'll

Box 5.2 Game theory

Game theory examines the way in which actors make choices when the outcomes following from that choice depend not only upon their own choice but the choice made by others. To see what is involved here consider the previously used example of people choosing which side of the road to drive on. When motorists drive towards each other they each have a choice of driving on the left or right. The outcome associated with each choice will however depend upon what the other person does. If one drives on the left and the other on the right then they will pass each other without incident. If they both drive on either the left or the right they will crash. Game theory examines the choice of actions and resulting outcomes in such interdependent situations.

The term game theory stems from the fact that the games played by game theorists share this strategic quality with parlour games like chess, bridge, poker and monopoly. Game theory was initially developed during the Second World War and used to analyse and improve the tactics of fighter pilots. Given its first formal academic airing by John von Neumann and Oskar Morgenstern (1944), game theory remained, for some time, an acquired taste. It was not until the 1950s that an introductory text was first published (Luce and Raiffa, 1957). Although games like the prisoners' dilemma were well-known, by the time he wrote *The Logic of Collective Action* Olson does not himself use any game theory.

The three games examined in this chapter are 'prisoner's dilemma', 'assurance' and 'chicken'. Whether these games are played between two or more people and whether they are played in a 'single-shot' or 'iterated' form, game theorists make the following assumptions:

- 1 Actors are instrumentally rational.
- 2 There is a common knowledge of rationality such that every player knows that every player is rational and that every player knows that every player knows that every player knows that every player is rational and so on (Hargreaves, Heap and Varoufakis, 1995: 23–6).
- 3 Actors must choose between different strategies often labelled 'co-operate' or 'defect'.
- 4 Actors know the rules of the game and know the outcomes and pay-offs associated with each possible combination of strategies.
- 5 Pay-offs can be specified in terms of ordinal utility. This provides a way out of the dilemma posed by the impossibility of making interpersonal comparisons of utility in that it allows the theorist to specify which outcomes each actor prefers without having to say by how much they prefer them.

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Given these assumptions, game theorists try to identify the choices individuals will make in particular situations and, thereby, the outcome of particular games. In some cases, most notably that of the prisoner's dilemma, this does not require any great insight as there is a 'dominant' strategy which it will be instrumentally rational for one person to pursue no matter what their opponent does. In other cases, where there is no dominant strategy, game theorists then assume that:

- 6 Rational actors will draw the same inferences when faced with the same information and given the same choices (often called the assumption of common priors). Given the assumption of a common knowledge of rationality, this means that actors will choose the best possible strategy on the assumption that their opponent will play their best possible strategy. The resulting outcome, if there is one, is a 'Nash' equilibrium.

In order to know how another person is going to behave it is, however, not always enough to know that they are instrumentally rational. Imagine you have to meet a friend somewhere in New York on an agreed date at an agreed time but you cannot communicate with them in order to fix a meeting-point. Where should you go? In itself it does not help very much here to say that you should choose a strategy on the assumption that your friend will choose the best possible strategy. But if you have always previously met at Grand Central Station this then becomes an obvious 'focal point' around which you can coordinate your actions (Schelling, 1960).

Most game theorists believe that it is possible to explain outcomes and events in the 'real world' by characterizing situations in terms of a particular game (but see Binmore, 1987). The choices actors make in this world are then explained by showing that they are the actions *any* rational actor would have taken in this situation. In this way practitioners have applied game theory to the study of voting (Gibbard, 1973), evolution (Maynard-Smith and Price, 1974), legal theory (Baird, Gertner and Picker, 1994), distributive bargaining (Scharpf, 1997), business strategy and marketing (Ghemawat, 1997), justice (Gauthier, 1986 and Binmore, 1995), superpower bargaining (Brams, 1990: 100–36), human emotions (Frank, 1988), anarchism (Taylor, 1987), biblical stories (Brams, 2002) and of course collective action (Hardin, 1982). The value of such applications depends of course upon the congruence between the assumptions listed above and the actual conditions in the situation being analysed.

Figure 5.1 *The prisoners' dilemma*

		Keith	
		Does not confess	Confesses
Jake	Does not confess	2,2	4,1
	Confesses	1,4	3,3

each get three years and that *each* is therefore better-off staying quiet. But this does not make any difference. To repeat, no matter what Keith does, Jake is better-off confessing. This is the dilemma. So ten minutes later the cop returns and Jake and Keith both end up confessing and the cop, during the final scene, remarks to a colleague that it is just as well that there is no honour amongst thieves.

To place this same argument in a more formal setting, consider Figure 5.1. Each prisoner has the choice of whether or not to confess, and there are four possible outcomes: (i) Jake confesses and Keith does not confess, (ii) Keith confesses and Jake does not confess, (iii) neither confess, (iv) both confess. Each outcome corresponds to one of the four cells shown in Figure 5.1. The first number in each of these four cells shows the pay-out (measured in years) for the player on the left (Jake). The second number shows the pay-out for the player on the top (Keith). On the assumption that Jake is instrumentally rational and will want to minimise his sentence, he will rank the outcomes as follows:

Jake confesses		Jake does not confess		Jake confesses		Jake does not confess
Keith does not confess	>	Keith does not confess	>	Keith confesses	>	Keith confesses

Keith's preference rankings are symmetrical. He most prefers the outcome in which he confesses and Jake does not, and least prefers the

outcome in which he does not confess and Jake does. What should Jake do? If Keith confesses he is better-off confessing (3 years is a shorter sentence than 4 years). If Keith does not confess he is still better-off confessing (1 year is a shorter sentence than 2 years). Because Keith is also better-off confessing no matter what Jake does, confession is the 'dominant' strategy and the equilibrium outcome is 3, 3 even though *each* would be better-off if they did not confess (two years is a shorter sentence than three years).

To see the connection between the prisoner's dilemma and the collective action problem assume the members of a group all favour a revolution and that they all face the choice of whether or not to join a proposed street protest (cooperate) or stay at home (defect). If the protest is successful, every person will benefit from the removal of the government and will do so whether or not they attend. Because joining the protest takes time and effort and may be quite dangerous, each person prefers the outcome in which they defect but all the others cooperate and the protest is successful. That is, each person will prefer to 'free-ride'. Because each person is committed, in principle at least, to the revolutionary cause, everyone's second-best outcome is that everyone cooperates. Everyone's third-best outcome is that everyone defects. Finally, and because they would not want to be the only person left standing at the barricades, everyone least-prefers the outcome in which they cooperate and join the protest and everyone else defects. Mapping these possibilities on to a two-by-two matrix in Figure 5.2 generates a

Figure 5.2 *N-person prisoners' dilemma*

		Others in the group	
		Cooperate	Defect
You	Cooperate (join protest)	3,3	1,4
	Defect (stay at home)	4,1	2,2

N-person prisoners' dilemma in which the pay-off to one person in the group is shown on the left and those of the rest of the group on the right (see Hardin, 1982: 27–8).

At first glance this game appears to have a very different structure. But this is because the numbers here are being used in a different way. In the previous example (that is in Figure 5.1), each number corresponded to a length of prison sentence and each prisoner naturally preferred a shorter sentence to a longer one (that is a smaller number to a higher one). In that example the numbers generated a 'cardinal' ordering in the sense that it was possible not only to say whether any one outcome was preferred to another, but by how much. In other words we were able to say not only that a two-year sentence was preferred to a four-year one, but that a two-year sentence was half the length of a four-year one. In this case, however, each number corresponds to a particular level of utility actors derive from outcomes *with a larger number indicating a greater amount of utility*. Because actors are assumed to be utility-maximizers they will prefer larger numbers to smaller ones. Furthermore, in this case the numbers only generate an 'ordinal' sequence in the sense that whilst we can say that one outcome is preferred to another, we cannot say by how much. People will prefer the outcome in which everyone stays at home to the one in which they protest and everyone else stays at home ($2 > 1$). But we cannot say that they will derive twice as much utility from this outcome. *The numbers in each box in all the remaining figures in this chapter also refer to the level of utility derived from outcomes with larger numbers preferred to smaller ones but with no indication by how much.*

Whatever the apparent differences between Figures 5.1 and 5.2, both are examples of the prisoner's dilemma. To see this note firstly that staying at home (defection), which is analogous to confessing in the previous example, is, once again, the dominant strategy. In the previous example, and as we have seen, each prisoner was better-off confessing no matter what they believed the other prisoner would do. In this example, each person is better off staying at home (defecting) regardless of whether they believe others will protest ($4 > 3$) or stay at home ($2 > 1$). Note also that this is the case even though the outcome in which everyone cooperates and joins the protest is Pareto-superior to that in which everyone defects ($3, 3 > 2, 2$).

In the rest of this chapter I will continue to analyse free-riding and the collective action problem primarily in terms of the prisoners' dilemma. Yet it should be emphasized that this is not the only game-theoretic form the collective action problem can take (Taylor and

Figure 5.3 Assurance game

		Farmer 2	
		Cooperate	Defect
Farmer 1	Cooperate (mend dam)	3,3	1,2
	Defect (stay at home)	2,1	2,2

Ward, 1982). Imagine a situation in which the survival of two farmers' crops depends upon the maintenance of a dam. We will start here by assuming that *both* farmers must work for one day if the dam is to be maintained. If each farmer has the choice of whether or not to cooperate, there are, once again, four possible outcomes. Both prefer the outcome in which they both cooperate and the dam is maintained. Both are indifferent between the outcomes in which they defect and the other person cooperates and the one in which they both defect. Finally, they least-prefer the outcome in which they cooperate and the other defects. Mapping these outcomes on to a two-by-two matrix generates the 'assurance' game shown in Figure 5.3. What will happen here? The first point to note is that there is no dominant strategy. If each farmer believes that the other farmer is going to cooperate, they are better-off cooperating ($3 > 2$). If each farmer believes that the other is going to defect they are better-off defecting ($2 > 1$). Yet given that each farmer prefers the outcome in which they both cooperate, it is unclear why either might believe the other would defect. If the farmers are rational, know each other to be rational, and know the pay-offs associated with each outcome, collective action should be easily achieved.

Assume now that the dam still needs repairing but that only one day's labour is required. This can be supplied by either one farmer working a whole day or from both farmers working for half a day. We then, once again, have a collective action problem, albeit of a slightly different sort. Both now prefer the outcome in which the other farmer does all the work and they defect. In turn, both prefer this to the

Figure 5.4 *Chicken game*

		Farmer 2	
		Cooperate	Defect
Farmer 1	Cooperate (mend dam)	3,3	2,4
	Defect (stay at home)	4,2	1,1

outcome in which they both cooperate and share the work. Both prefer this to the outcome in which they do all the work and the other farmer defects. Finally, the worst possible outcome for both farmers is that they both defect and the dam eventually collapses. Mapping this on to a two-by-two matrix in Figure 5.4 generates the game of 'chicken'.

In this game there is, once again, no dominant strategy. Whether or not a farmer is better-off cooperating depends on what they believe the other farmer will do. If they believe that the other farmer will cooperate they are better-off defecting ($4 > 3$). If they believe that the other farmer will defect they are better-off cooperating ($2 > 1$). So what will happen? One possibility here is that one farmer will try to pre-commit themselves to defecting by, for example, claiming to have hurt their hand. They will do this in the knowledge that if they can persuade the other farmer of the sincerity of their intention to defect (regardless of whether they can persuade them that they *really* have damaged their hand) that the other farmer will then find it in their interests to do all the work themselves ($2 > 1$). Yet if both try to pre-commit in this way, there is of course a danger that each will thereby achieve their worst possible outcome (1, 1). But if one farmer realizes this and so calculates that the other will eventually back-down and cooperate, they will be tempted to defect ($4 > 3$). Yet if one farmer realizes this, then, given the assumption of a common knowledge of rationality, the other one will do so as well. If they both realize that they both realize it, then both will have to recognize that neither might cooperate. In short, and in a single play of the game, anything can happen.

Resolving collective action problems

In the world in which we live, collective action problems are frequently surmounted; trade unions are formed, revolutions do sometimes happen and pressure groups are created. Although global warming now poses a considerable threat, it is worth noting that, in recent decades, European countries have successfully worked together to reduce emissions of sulphur dioxide which causes 'acid rain'. Finally, and without wanting to deny either the subjective force of the security dilemma, or the obvious fact that countries do sometimes go to war with each other, it is worth emphasizing that since the creation of the nation-state system most countries have remained at peace with each other most of the time. More impressively, the evidence suggests that whilst democratic countries are as likely to go to war as non-democratic ones, no democratic country has ever gone to war with another democratic country (Huth and Allee, 2000). For all these reasons it is tempting to conclude that Olson is simply wrong and that there is no collective action problem (see Jordan and Maloney, 1996). Yet this would be to misread Olson's argument. Olson argues that there is a collective action *problem*. He does not suggest that groups will *always* fail to overcome it. Indeed many of the most interesting and innovative parts of the *Logic of Collective Action* specify the ways and circumstances in which groups manage to act collectively. In the rest of this chapter I will review some of these arguments.

Coercion

Many of the collective action problems we confront are resolved for us by the state. As individuals we do not have to decide whether to contribute to the cost of providing defence forces, roads, or social security programmes. The state requires us to contribute to their cost and threatens those who refuse to pay their taxes with jail. Environmentalists (Heilbroner, 1974; Ophuls, 1977) have also argued that coercion is needed to revolve environmental problems posed by the 'tragedy of the commons' (Box 5.3).

It is not only the state which can play the role of coercive leviathan. Criminal gangs and warlords can sometimes perform the same function. Diego Gambetta (1993) argues that the Mafia prospered in Southern Italy in the nineteenth century because it was trusted to oversee and enforce market exchanges. To follow the logic of this argument, assume that a peasant farmer wants to sell one of his sheep to the

Box 5.3 The tragedy of the commons

Garrett Hardin's (1968) analysis of 'the tragedy of the commons' has proven to be immensely influential. His argument – which, strangely, contains no references to Olson's work – concerns the use and misuse of environmental resources like common pasture land, fisheries and water basins which are rivalrous but non-excludable. Take the case of common land. This good is rivalrous in the sense that grass eaten by one farmer's sheep or cattle cannot then be eaten by another's. It is non-excludable in the sense that no farmer can stop another from grazing their animals on the land. The farmers have a shared interest in regulating the use of the land because if too many cattle are left to graze, the land will be damaged. The farmers must however confront a collective action problem. For even if each of them were aware of the total number of animals that the land could sustain, each farmer would find it in their interests to graze as many of their animals as possible. Furthermore, this will be so whether or not each farmer believes the others will exercise any restraint:

Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit in a world that is limited. Ruin is the destination to which all men rush, each pushing his own best interest in a society that believes in the freedom of the commons. (Hardin, 1968: 1244)

Hardin (1968, 1246) argues that if the tragedy of environmental destruction is to be avoided and the commons saved, 'people must be [made to] be responsive to a coercive force outside their individual psyches, a "leviathan" to use Hobbes' phrase'. Caught in a collective action problem, people must be forced to act in their own interests. By implication, the state ought to control access to the use of common pool resources.

In response, free-market economists have argued that the tragedy of the commons is caused by the absence of any clearly defined property rights. By privatizing common pool resources and creating property rights, owners, it is argued, can be given an incentive to preserve their resources (Demsetz, 1967). It is not difficult to see how a piece of land might be privatized, but what about environmental problems like atmospheric pollution where chemicals released in one place cause damage elsewhere? In such cases free-market economists have recognized the need for a supra-national leviathan but have also argued for the use of tradeable permits. Individual countries or factories should, it is argued, be given the right to produce a certain amount of pollution. A market can then be created which would allow them to either sell that right to or buy additional rights from other users. The general claim made for such a system, which draws upon the Coase Theorem (see Box 3.4) is that it will be more efficient because it gives those in whom the initial right to pollute is vested, the incentive to use that right responsibly (see Carter, 2001: 295–302).

local butcher. Although the exchange may be mutually beneficial, the butcher may not trust the farmer to sell them a healthy sheep. The butcher could of course pay a veterinarian to inspect the sheep but because this would add to the transaction costs of the exchange, so deterring them from dealing with the farmer. If it is operating effectively, the state reduces transaction costs and so facilitates exchange by providing a legal framework within which actors can, for example, claim damages from each other (see North, 1990). Yet in Southern Italy, the state was, at this time, inherently weak and mistrusted. In these circumstances Gambetta argues that the Mafia was able to prosper by promising to exact revenge on anyone who acted dishonestly in return for a share of the profits of every exchange.

Privileged groups

In what Olson calls a latent group, no one individual will be prepared to bear their share of the cost of providing a collective good. A privileged group is one in which at least one individual values the good to such an extent that they are prepared to bear the entire costs of providing it and, in doing so, to tolerate the free riding of others (Olson, 1965: 48–50). Imagine five students sharing a flat. Keeping the flat clean or at least tolerably hygienic poses a potential collective action problem. But if one student has a pathological hatred of squalor they may be willing to clean the flat without any help from the others. The group would then be a privileged one.

The theory of hegemonic stability developed by international relations theorists offers a substantive application of this basic idea. Liberals argue that a secure and prosperous international order depends upon the provision and maintenance of an open trading regime, a stable international currency, and a sense of security. These are all collective goods (Keohane, 1984). For whilst every country will be better-off in a world of free trade, every country will gain from erecting tariff barriers so long as it can continue to export to the rest of the world. Charles Kindleberger (1981) maintains that in an anarchic international system, this collective action problem is most likely to be resolved when there is a 'hegemonic' power. The idea here is that such a power will benefit from the existence of a liberal international order to such an extent that it will be willing to bear the costs of maintaining it. It will do this by allowing its currency to act as an international reserve currency, and its army to act as an international police force preventing territorial attacks and ensuring free trade. The periods of

international peace and prosperity which characterized the nineteenth and late twentieth century were, it is then argued, secured through first British and then American hegemonic power. Britain's loss of its hegemonic status in the first part of the twentieth century, it is concluded, led to a period of protectionism and financial crisis and, eventually, World War.

If there is only one person within a group who values the collective good to such an extent that they are prepared to bear the entire costs of providing it, the collective action problem is likely to be resolved. What, however, if there are a number of people who are prepared to bear the entire costs of providing a collective good? In this case, and as Olson (1965: 50) recognizes, the collective good may not be provided. For in such a situation, previously analysed in terms of the game of chicken, *each* individual might try to free-ride in the expectation that one of the others will eventually provide all of the good.

Selective incentives

Olson (1965: 133–5) argues that *excludable* selective incentives are often used to encourage the members of a group to contribute towards the provision of a collective good. A positive selective incentive takes the form of a reward extended to those, and *only* those, who contribute to the provision of a collective good. In the case of, for example, the collective good of collective bargaining, Olson suggests that workers may be led to join a union by the prospect of acquiring free legal representation. A negative selective incentive, on the other hand, takes the form of a punishment or cost extended to those, and *only* those, who fail to contribute to the provision of a collective good. In the case of union membership, some workers are led to join by the fear of otherwise being ostracized – or ‘sent to Coventry’ – by their colleagues.

Olson demonstrates that selective incentives are often used to help ensure the provision of selective incentives. Yet they cannot, by themselves, explain any and every instance of collective action (Elster, 1989: 37–42). For if an organization like a trade union is using the selective incentive of legal representation as a kind of bait to attract additional members, we still need to explain how some of the workers overcame a collective action problem and formed a union in the first place. At this point we might invoke the existence of selective incentives not requiring any formal method of organization. But we then need to explain how the members of a group overcame the second-order collective action problem entailed by the application of these incentives.

Assume that workers will join a union if they fear being ostracized. Because the application of this negative incentive does not require any formal organization, this fear can perhaps be used to explain the creation of the union. But we then still need to explain why any one worker would be prepared to ostracize their colleague in order to secure the collective benefit of deterring free-riding. It might be argued that they would do so for fear of being ostracized themselves. But at this point we are hovering on the edge of an infinite regress. For why would it be in anybody's interest to ostracize somebody who failed to ostracize somebody else?

Although successful collective action often requires the involvement of a large number of people, a pivotal organizational role is sometimes played by a small number of leaders or entrepreneurs. Revolutions are, for example, rarely spontaneous events. The Russian revolution was organized and led by Leon Trotsky, the Cuban revolution by Che Guevara and Fidel Castro and the American Civil Rights movement by Martin Luther King. One way in which entrepreneurs can facilitate collective action is by providing selective incentives (Frolich, Oppenheimer and Young, 1971). In the case of, for example, a street protest we might expect entrepreneurs to facilitate participation by promising future rewards to those who become involved and eternal enmity for those who free-ride. These entrepreneurs might, in turn, be motivated by the promise of an attractive job in a future revolutionary regime. In this way, and without the threat of an infinite regress, entrepreneurship might provide the answer to the second-order collective action problem posed by the existence of selective incentives.

Process benefits

Olson assumes that individuals regard contributions towards the provision of a collective good as a cost to be minimized or, if possible, eliminated. In some circumstances individuals may, however, regard the process of contributing as itself being of either instrumental or expressive benefit. When this is the case, the collective action problem simply dissolves (Hirschman, 1982). In his study of the American Civil Rights movement, Dennis Chong (1991: 82) attempts to explain why activists, often college students from a comfortable backgrounds, were prepared to join demonstrations and take part in freedom rides during the course of which they risked violent confrontation and jail. Drawing on personal recollections, he finds that individuals were driven, at least in part, by the adrenaline rush of direct involvement, the feeling of

being in the midst of historically important events and of 'being in fashion or of setting it' (Chong, 1991: 82).

The existence of such process benefits may sometimes help explain how the second-order collective action problem entailed by the provision of selective incentives is overcome. On Israeli Kibbutzim, members are provided with housing, food and their other basic needs free of charge and given a small stipend to cover other expenses. The collective action problem posed by the application of this socialist ethic is an obvious one. If everyone is paid regardless of whether or not they work, everybody has an incentive to 'shirk'. Yet kibbutz members clearly do work very hard. One reason why they do so is that those who are perceived to be shirking soon become the victims of often vicious gossip. Why are members prepared to gossip about each other? There is no great mystery here, no second-order collective action problem which needs to be resolved. Gossiping is an enjoyable activity. It allows individuals to affirm their superiority over those gossiped about, their access to confidential information and their willingness to take someone else into their confidence (Bergman, 1993: 145–53).

In a sense, process benefits deriving from participation in collective action are simply a particular form of positive selective incentive. Yet there is an important difference. In the case of, for example, free legal representation, the selective incentive stands apart from and can be provided separately from the collective good of trade union membership. Indeed in this particular case it is unclear why anyone would want to pay to join the union in order to get free legal representation when they could, at a presumably cheaper cost, simply insure themselves for legal representation. Yet in the case of process benefits, the selective incentive is tied to and is, in some instances, constitutive of the collective good itself. It is possible to get the adrenaline rush which comes from a violent confrontation by starting a fight in a bar; the politically charged rush which comes from being involved in a demonstration cannot, however, be enjoyed without joining a demonstration.

Conditional cooperation in intermediate groups

Olson talks about the existence of intermediate as well as latent and privileged groups. An intermediate group is one whose members are in a position to 'notice whether any other member is or is not helping to provide the collective good' (Olson, 1965: 50). In such groups it is *possible* that the collective good will be provided through a process of conditional cooperation in which everyone agrees to cooperate so long

as everyone else (or perhaps nearly everyone else) cooperates as well. In a single play of the prisoners' dilemma game, conditional cooperation will be possible if each person promises to cooperate if others cooperate *and* if, somehow, it can be arranged that nobody need commit themselves to cooperating until they have seen that others are prepared to do the same. In an 'iterated' game, conditional cooperation will be possible if, either through their words or deeds, members of the group can communicate their commitment to only cooperate in the future with those who have cooperated in the past: a strategy sometimes known as 'tit-for-tat'.

As we have already seen, in a one-shot prisoners' dilemma, cooperation, although mutually beneficial, is individually irrational. In an 'iterated' or repeated game it may, however, be in a person's self-interest to cooperate. Robert Axelrod (1984) invited a number of economists to submit strategies for playing a 'round-robin' version of the prisoners' dilemma in which each strategy was pitted against every other strategy in a series of games each one of which lasted for 200 rounds. Points were awarded to each strategy on the basis of the outcome of each round of each game. Three points was awarded if both players cooperated and one point if both players defected. If one person defected and the other cooperated, the person who defected was awarded five points and the person who cooperated zero points. Although these pay-offs differ from those found in Figure 5.1, the structure of this game remains that of the prisoners' dilemma. Fourteen strategies were submitted. Once all the games had been played and the scores calculated, the clear winner was 'tit-for-tat'; the strategy of cooperating on the first round and then doing whatever the other person did in the previous round. Axelrod then announced a second tournament. Two hundred strategies were submitted and tit-for-tat was, once again, the winner.

Tit-for-tat will not beat any strategy. In a one-off game against a strategy of always defecting it will, for example, lose; for in the first round the person playing tit-for-tat will cooperate and receive zero points whilst the person defecting will get five points. In subsequent rounds, when tit-for-tat defects in retaliation each player will gain one point and so the strategy of always defecting will therefore maintain its slight lead. It is when it is judged in terms of its average performance against *all* other strategies that tit-for-tat does well. This performance can be accounted for in terms of three features. The first is its relative simplicity. The strategy is not a difficult one to describe and it is not difficult to 'spot' during a game. The second is its generosity. Tit-for-tat

rewards cooperation and does not risk provoking unnecessary conflict by occasionally defecting in the search for small relative advantages. The third is its responsiveness. Tit-for-tat responds to defection with defection and so cannot be trapped into receiving the lowest pay-out for long (for a more detailed discussion see Sober, 1992).

In a series of detailed case-studies of the management of common pool resources including fisheries, common land and irrigation systems, Elinor Ostrom (1990; Dolsak and Ostrom, 2003) shows how groups of individuals have, over time, formulated often quite complex rules of allocation, monitoring and sanctioning which allow them to 'sustain long-term productive use of natural resource systems'. Far from requiring the help of a leviathan or the market, individuals are, Ostrom argues, capable of resolving their own collective action problems through 'tit-for-tat' conditional cooperation. Conditional cooperation of this sort is most likely to emerge in certain conditions:

- 1 Individuals must believe it is likely that they will continue to interact with each other over a long period of time and so have an incentive to develop a positive reputation for co-operating (Box 5.4). Conditional cooperation is unlikely to emerge within groups that have a high turnover of members and in which individuals therefore believe that they may not be punished tomorrow for any free-riding they do today. Consider one of the examples Axelrod uses; that of trench warfare during the First World War. When left to face each other for a long period of time across no-man's land, soldiers evolved quite detailed norms of cooperation. Soldiers would only fire at each other at certain times of the day and, in one celebrated instance, even gained sufficient confidence in each other to emerge from their trenches and play a football match on Christmas day. Horrified at the implications of this, each army's commanders started to rotate their troops knowing that this would erode trust.
- 2 One specific implication of this is that conditional cooperation is more likely to emerge within groups that it is difficult or costly to leave. Gossip is an effective social sanction in kibbutzim because it is, psychologically at least, very difficult for kibbutzniks who were born into a communal lifestyle to leave the kibbutz and operate within a capitalist economy.
- 3 Conditional cooperation is also more likely to emerge in groups whose members can detect at a relatively low cost whether someone has previously cooperated. In some cases, entrepreneurs can facilitate collective action by providing this kind of information free of

charge. At other times, institutions can be designed in a way that reduces monitoring costs. Ostrom (1990: 95) shows, for example, how the irrigation systems around Valencia have been designed in such a way that the person whose turn it is to next use the water supply has a built-in incentive to ensure that the person using it before them does not take more than their allotted share.

- 4 Conditional cooperation is also more likely to succeed in socially integrated groups. As we have already seen, groups can sometimes induce cooperation by threatening to ostracize those who free-ride. Such a threat is more likely to prove effective in tightly-knit groups like the mafia, kibbutzim, revolutionary movements, and armies, whose members not only work but drink, eat and live together.

As well as distinguishing between latent, privileged and intermediate groups, Olson (1965: 44–8) at various points talks about the existence of ‘large’, ‘small’ and ‘intermediate’ groups with these terms referring to the physical size of the group itself. Olson suggests that collective action problems will prove harder to resolve in large groups and that large groups are therefore more likely to be latent. The basic argument here is a straightforward one. It will usually be easier to see who has previously cooperated in smaller groups. Yet the relationship between size and ‘latency’ is, at most, an empirical tendency. In some cases the members of a large group like a mining community may all know each other extremely well and may all know who is free-riding. At other times, a small group such as the residents in a bed-sit who have a shared interest in keeping their communal living areas clean, may not know each other at all.

Nearly all of the literature on conditional cooperation takes as its template the prisoners’ dilemma game. Yet as I have already emphasized, collective action problems can also take the form of a ‘chicken game’. Recall the earlier example of two farmers at least one of whom must undertake repair work on a dam. What will happen when this game is iterated over a number of years? One possibility here is that the two farmers will develop and abide by a norm of either sharing or taking it in turns to do the work. Yet it is also possible that the farmer who does all the work in the first year will find themselves trapped into doing it in subsequent years as well. If the first farmer does all the work in the first year then the second farmer may well reason that they will agree to do it in the second year as well. Knowing that the second farmer will be thinking in this way, the first farmer may feel that they have no alternative but to fulfil the second farmer’s expectations so as

Box 5.4 Reputation, trust and backward induction

People are most likely to want to cooperate in the future with those whom they most trust to cooperate with them. People are most likely to trust people who have a good reputation for being trustworthy. If their actions are easily observable, people are most likely to have such a reputation if they have cooperated in the past. People have an incentive to cooperate and acquire a good reputation because this will make it more likely that people will cooperate with them in the future (Kreps and Wilson, 1982; Kreps, 1990; Williamson, 1993; Hargreaves, Heap and Varoufakis, 1995: 178–89).

The significance of trust and reputation as a lubricant of cooperation extends beyond the prisoner's dilemma. Consider the following game in which there is an explicit dynamic structure. At time T_1 a consumer must choose whether or not to buy a car from a second-hand car salesman. If they decide to do so then at T_2 the salesman must choose whether or not to sell them a 'lemon'. There are three possible outcomes. The first is A in which the consumer is sold a lemon. The second is B in which they are sold a good car. The third is C in which they do not buy a car. Assume that the salesman ranks these outcomes as follows. They most want to sell the consumer a lemon because this will give them the highest profits. If this is not possible they want to sell the consumer a good car because they will still make some profit on this sale. They will most want to avoid the outcome in which the consumer does not buy a car ($A > B > C$). Assume that the consumer ranks the outcomes as follows. They will most want to buy a good car. If this is not possible

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to avoid the worst possible outcome of both defecting. Eventually, the first farmer may well resolve to shake-off their reputation and force the second farmer to do their share. But at this point, actions will speak louder than words. In order to convince the second farmer of their resolve, the first farmer may have to defect in the knowledge that this will almost certainly mean enduring the worst outcome for at least one round.

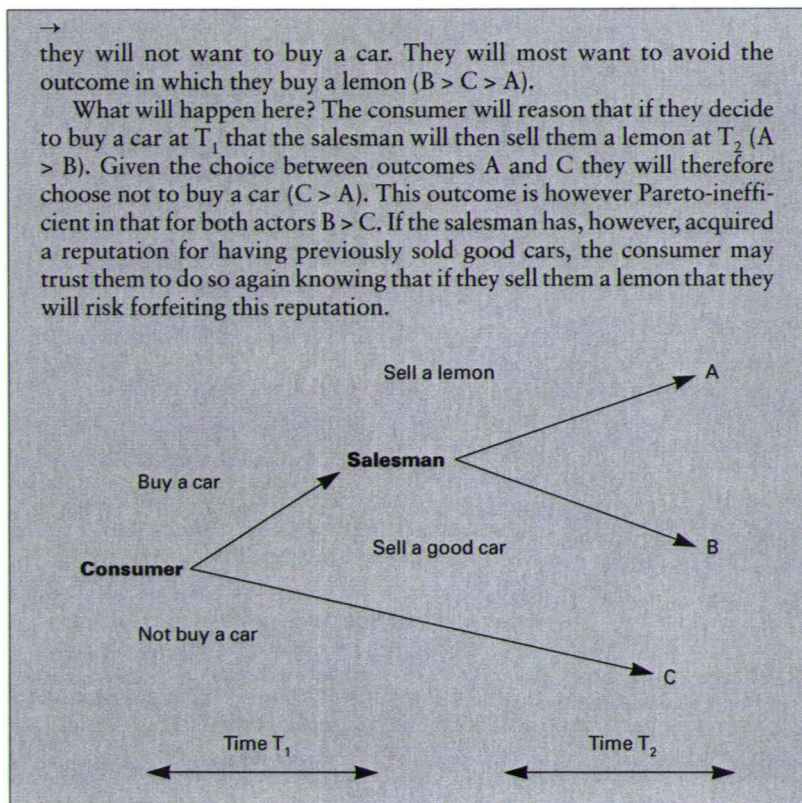
The limits of self-interest

Olson's analysis is predicated on the assumption that individuals are self-interested and that they will, if given the opportunity, free-ride. Yet many individuals contribute to the provision of collective goods not because they feel that it is in their interest to do so or because they enjoy doing so but because a social norm leads them to believe that they

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they will not want to buy a car. They will most want to avoid the outcome in which they buy a lemon ($B > C > A$).

What will happen here? The consumer will reason that if they decide to buy a car at T_1 that the salesman will then sell them a lemon at T_2 ($A > B$). Given the choice between outcomes A and C they will therefore choose not to buy a car ($C > A$). This outcome is however Pareto-inefficient in that for both actors $B > C$. If the salesman has, however, acquired a reputation for having previously sold good cars, the consumer may trust them to do so again knowing that if they sell them a lemon that they will risk forfeiting this reputation.



ought to do so (Box 5.5). As Olson (1965: 16) eventually acknowledges, his analysis cannot be used to explain collective action in 'non-economic' groups like Greenpeace or Amnesty International which exist to promote other people's interests and which people do not join for self-interested reasons.

Several decades of applied research have borne out Olson's arguments about the limits of the assumption of self-interested behaviour. In one now famous experiment, Gerald Marwell and Ruth Ames (1981) gave volunteers a number of tokens which they could invest in a 'individual' or 'group' bank. Tokens invested in individual banks were exchanged for two dollars. Tokens invested in the group bank were exchanged for five dollars with this sum being divided between all the members of the group regardless of whether (or how much) they had contributed. In this situation – equivalent to a one-shot prisoners' dilemma – self-interested individuals ought to have invested *all* their

Box 5.5 Norms

Instrumental rationality is concerned with outcomes. It tells people that if they want to achieve X that they ought to do Y. Action guided by social norms are not outcome-orientated. Norms simply tell people to do (or not do) Y, or to do (or not do) Y if people do X. Jon Elster (1989: 98), whose definition this is, distinguishes the following types of norms: (i) consumption norms such as those regulating dress codes and table manners; (ii) norms against behaviour 'contrary to nature' such as those which proscribe incest and cannibalism; (iii) norms regulating the use of money such as an apparent norm against walking up to a person in a queue and offering to buy their place; (iv) norms of reciprocity which enjoin us to do to others as they *have* done to us (in contrast to the moral injunction to do to others as we *would* have them do to us); (v) professional norms which, for example, require doctors to treat patients on the basis of need; (vi) codes of honour which require people to avenge insults; (vii) norms of retribution which can lead to vendettas or feuds; (viii) work-place norms which require people not to shirk on the efforts of others; (ix) norms of distribution such as those mandating equal division.

The existence and apparent motivational force of norms would seem to pose a challenge to rational choice theory. If people are indeed led to behave in particular ways by the existence of norms (as sociologists often assert) then they cannot always be motivated by instrumental considerations of self-interest (as economists claim). In order to protect

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tokens in the individual bank and ought to have done so so regardless of whether or not they believed other individuals would cooperate. Yet Marwell and Ames found that around 40 per cent of tokens were invested in the group bank (for other similar findings see Kim and Walker, 1984; Orbell and Dawes, 1993; Isaac, McCue and Plott, 1985; Henrich *et al.*, 2001; and for a review, Ostrom, 1998).

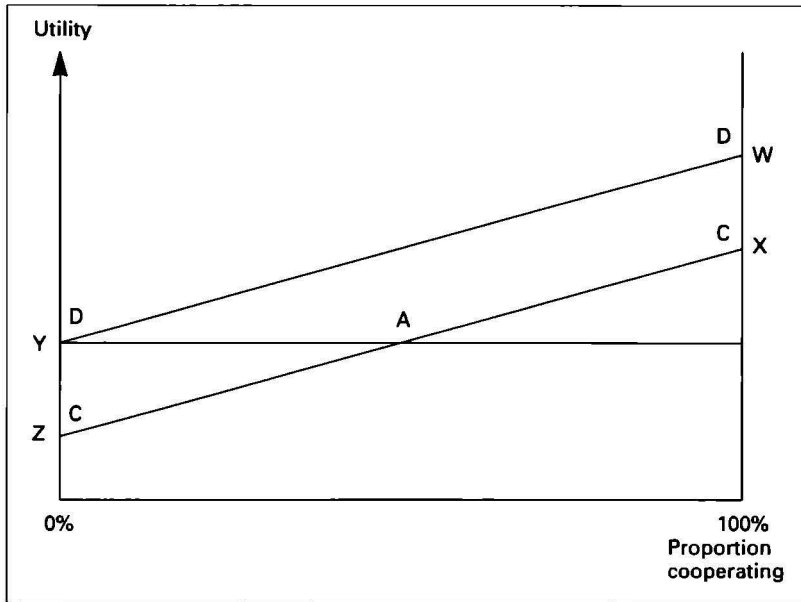
Two other robust findings from these applied experiments are worth reporting. First, that levels of cooperation increase when individuals are given the opportunity to talk to each other before playing and, more specifically, when they are given the opportunity to look at each other whilst doing so (Sally, 1995). This is significant because in a one-shot game the opportunity for communication should not make any difference as participants will have no reason to believe any promises that are made (Farrell, 1987). In such situations 'covenants without the sword are but words, and of no strength to secure a man at all' (Hobbes, 1969: 117). Yet it would appear that people are, in some way,

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their discipline, economists and rational choice theorists rely upon some mix of the following arguments. (1) People often follow norms out of habit. When, however, adherence to a norm conflicts with self-interest, the latter usually wins out. (2) People manipulate norms in pursuit of their self-interest. People in weak bargaining positions invoke the norm of equal division whilst those in a stronger position appeal to a norm that people should get out of some venture what they put in. (3) People adhere to norms to the extent that other people make it in their self-interest to do so. In certain societies people act to avenge insults because they know that if they did not do so that they would lose all social standing. (4) People adhere to norms to the extent that they make it in their own self-interest to do so. People internalize norms at an early age and adhere to them in later life because they experience a psychic 'cost' when breaking them. (5) Norms emerge and survive to the extent that they are in our long-term and collective self-interest. Consider, for example, the norm enjoining us to 'do our bit' for some collective endeavour. In certain situations, most notably those modelled in the prisoner's dilemma, the existence of such a norm, which precludes free-riding, can lead to Pareto-optimal outcomes (for refinements and variations upon this argument see Ullmann-Margalit, 1977; Coleman, 1990). Such arguments do, however, often have a spuriously functionalist air about them. As Elster (1989: 140) comments, 'even if a norm does make everybody better off, this does not explain why it exists, unless we are also shown some feedback mechanism [such as natural selection] that specifies how the good consequences of the norm contribute to its maintenance'.

hard-wired to respond to human interaction. Second, that whilst levels of cooperation tend to fall when the stakes are raised, they nevertheless remain positive. Marwell and Ames found that when the 'gearing' on contributions to the individual bank were raised from two to five dollars that the proportion of tokens invested in the group bank fell from 40 to around 20 per cent.

One way in which rational choice theorists might react to such findings is by restricting their explanatory focus to those situations in which the stakes are very high – that is higher than those found in experiments funded using taxpayer's money – or in which there is no socially accepted norm proscribing the pursuit of self-interested behaviour. Alternatively, rational choice theorists can in their attempt to explain particular instances of collective action show how, in some cases, a relatively small number of people who cooperate because they believe that they ought to do so can make an important difference to the overall level of collective action.

Figure 5.5 *Collective action and thresholds of cooperation*

In Figure 5.5 the horizontal axis shows the proportion of people within a group contributing to the provision of some collective good. The vertical axis shows the pay-off to any one person from their decision of whether to cooperate (C) or defect (D) at differing levels of overall cooperation. The basic structure of this game is that of the prisoners' dilemma. For each person, defection is *always* better than cooperation. The highest pay-off is received from defecting when everyone else is cooperating (marked as W), then from cooperating when everyone cooperates (marked as X), then from everyone defecting when everyone defects (marked as Y), and, finally, from cooperating when everyone else defects (marked as Z). Point A where the line CC intersects with the horizontal bar shows an important threshold for collective action. If there are *at least* A cooperators then each of them will, at this point, be better-off if they continue to cooperate. In other words, at any point at or beyond A, those who are cooperating will receive as large a pay-out from continuing to cooperate as they would if all were to defect. It would be a mistake to read too much into the point at which A falls on this diagram. Without altering the underlying structure of the game, the lines C and D could be arranged in such a way that the threshold fell to the left or right of A.

There are, however, two very general points which can be made. The first relates to the terms of conditional cooperation. If people are only cooperating because others are cooperating it is not difficult to imagine a situation in which one person's defection leads to another person's defection, and then another, and so on, until all defect. Yet the existence of this threshold shows that quite limited levels of cooperation may sometimes be stable. Assume that the proportion of people cooperating is B (where $B > A$). If, at this point, some people defect, it may make sense for the others to continue to cooperate knowing that so long as the proportion of people cooperating is greater than A that they are all better-off not defecting. The second point is that this threshold, although stable, may not be easily accessible (Elster, 1989: 29–32). For if the number of people cooperating is initially zero, then until the threshold is reached not only will each person will be worse-off cooperating than defecting, each of the people cooperating will be worse-off than they would have been if they had *all* defected. In these circumstances it may be very difficult to initiative any collective action. It is at this point that the existence of just a few unconditional cooperators might make a significant difference. For these individuals are likely to cooperate even if they are all apparently worse-off by doing so. Successful collective action will not usually depend upon everyone in a group eschewing their self-interest. In its early stages it may however require that a few are prepared to do so.

Assessment

Although the basic idea that groups must confront and surmount a collective action problem now seems quite obvious, this is only because Olson has made it seem so (McLean, 2004). Although Hobbes, Hume and Rousseau offered specific examples of what we would now call collective action problems, Olson was the first person to offer a general analysis of the reasons why and the circumstances in which it arises. Olson is still sometimes interpreted as arguing that collective action is impossible or somehow irrational. Yet this is not the case. Indeed one of the most positive legacies of Olson's work is a number of detailed case-studies of specific instances of collective action showing how selective incentives and conditional cooperation operate can make a real difference. Such studies, a number of which have already been referred to in this chapter, include explanations of the household division of labour (Carling, 1991), the American Civil Rights movement

(Chong, 1991), East Asian peasant uprisings (Popkin, 1979), the origins of the Mafia (Gambetta, 1993), the evolution of the firm (Miller, 1992), the military draft (Levi, 1997), ethnic conflict (Hardin, 1995), and the management of common pool resources (Ostrom, 1990).

Olson's book and the work it has inspired cannot, however, explain everything. One of its limitations has already been discussed; Olson assumes that actors are self-interested. Whilst this assumption may sometimes be of value, it cannot be used to explain the behaviour of those who join or contribute to groups because they simply believe that it is the right thing to do. I will conclude by briefly pointing to a second limitation. *The Logic of Collective Action* tells us something about the ways and circumstances in which groups can overcome the collective action problem posed by free-riding, yet Olson's book does not (and does not claim to) provide a comprehensive theory of collective action. It cannot tell us about how individuals acquire interests which lead them to identify with a particular group; how the members of a group agree on particular policy platforms; how and when particular forms of collective action induce changes in government policy; and how and why groups sometimes collapse. There is no reason why rational choice theorists cannot address these topics. But it would be a mistake to think that *only* rational choice theorists can do so. If anyone were to attempt to formulate a comprehensive theory of collective action, they would be advised to draw not only on Olson but on work conducted by, for example, social psychologists showing how our identification with and membership of groups is an essential part of our personal identity (Tajfel and Turner, 1986; Haslam, 2000) and on political scientists' findings that 'insider' (Grant, 2000) groups operating within sectional policy communities (Marsh and Rhodes, 1992) are more likely to influence policy.

Chapter 6

William Niskanen and Bureaucracy

Overview: Bureaucrat and bureaucratic are routinely used as terms of abuse. In novels bureaucrats are portrayed as faceless tyrants (Kafka's *The Trial*), incompetent wastrels (Dickens' *Little Dorrit*) or petty time-servers (Balzac's *Bureaucracy*). In *Bureaucracy and Representative Government*, William Niskanen argues that public-sector bureaucracies 'supply an output up to twice that of a competitive industry faced by the same demand and cost conditions' because bureaucrats maximize the size of their budgets (Niskanen, 1971: 64). The public sector is inefficient and it is inefficient because public-sector organizations are bloated. Niskanen's argument has proven to be both academically and politically important. Academically, *Bureaucracy and Representative Government* remains 'the most cited and influential theory of bureaucracy to emerge within public choice' theory (Moe, 1996: 458). Few, if any, rational choice theorists, Niskanen included, now argue that bureaucrats are budget-maximizers. But *Bureaucracy and Representative Government* has nevertheless set the research agenda for work in this area. Politically, Niskanen's work has encouraged efforts to 'roll back the frontiers of the state' (Thatcher, 1993: 744–5) through privatization, contracting-out and the creation of internal markets.

In the first part of this chapter I briefly document the growth of the state in the postwar years. Having identified some of its intellectual precursors, Niskanen's argument is introduced through the behavioural assumption that bureaucrats derive utility from increases in their budgets, and the equilibrium argument that they can extract inefficiently large budgets from their political sponsors. Subsequent sections review more recent work. The behavioural assumption that bureaucrats maximize the size of their budget is contrasted with claims that bureaucrats maximize the size of their discretionary budgets or, alternatively, that they 'bureau-shape'. The equilibrium argument that bureaucrats can extract inefficiently large budgets is contrasted with the claim that politicians actually dominate bureaucrats.

Setting the stage: the growth of the state

As Table 6.1 indicates, between the outbreak of the First World War and the early 1980s, the state more than doubled in size in every one of the

Table 6.1 *Central government expenditure in the G7
(per cent of GDP)*

<i>Country</i>	<i>1870</i>	<i>1913</i>	<i>1937</i>	<i>1960</i>	<i>1980</i>	<i>1996</i>
Italy	13.7	17.1	31.1	30.1	42.1	52.7
Canada			25.0	28.6	38.8	44.7
France	12.6	17.0	29.0	34.6	46.1	55.0
Germany	10.0	14.8	34.1	32.4	47.9	49.1
Japan	8.8	8.3	25.4	17.5	32.0	35.9
UK	9.4	12.7	30.0	32.2	43.0	43.0
USA	7.3	7.5	19.7	27.0	31.4	32.4

Source: Data from Mueller (2003), p. 503; original source cited as Tanzi and Schuknecht (2000).

G7 countries. By the 1990s this rate of growth had been reduced but not reversed. How ought we to understand its consequences? Those on the right would argue that it has compromised both individual freedom (Hayek, 1944) and economic growth (Grossman, 1990). Arguments of this sort are, however, obviously controversial. Social Democrats would argue that the growth of the state has facilitated a significant extension of positive freedom and stimulated economic growth.

Another way of approaching this issue is to ask why states have grown and to consider the implications of the resulting explanations. This is a difficult area because different states may have grown for very different reasons. Three very general explanations may, however, encourage us to regard the growth of the state as being entirely benign. The first such explanation is that this growth occurred as a result of efforts to correct market failures (Box 6.1). In the postwar years governments sought to correct externalities, provide public goods, nationalize monopolies and correct income inequalities. All these actions necessitated the growth of the state. The second and related explanation is that the dramatic postwar growth in personal income encouraged voters to support left-wing parties committed to higher public expenditure on healthcare, education and welfare (Rodrik, 1998). The third is that productivity in the capital-intensive private sector grew far more rapidly during the postwar years than it did in the labour-intensive public sector. In order to maintain a suitable level of services, government spending as a proportion of gross domestic product therefore grew (Baumol, 1959).

As might be expected, rational choice theorists offer a very different set of explanations; they present the growth of the state as resulting from political failures, and two arguments have proven particularly influential. The first, which we will concentrate upon here, is that the growth of the state can be attributed to the ability of bureaucrats to hijack the political process and push public expenditure above those levels favoured by the median voter. The second, which we will examine in the following chapter under the broad heading of rent-seeking, is that the state has grown because politicians have found it in their electoral self-interest to sell policy favours including expenditure programmes and increased regulation to interest-groups.

The precursors of bureaucratic theory

In the introduction to *Bureaucracy and Representative Government*, Niskanen (1971: 7) identifies three 'venturesome economists' whose work he regards as having provided both the inspiration for and the foundations of his own theory. These are Gordon Tullock, some of whose work on rent-seeking we will examine presently, Anthony Downs, whose work on party competition we discussed in Chapter 2, and Ludwig von Mises.

Along with Leon Walras and Stanley Jevons, Ludwig von Mises (1881–1973) is one of the economists usually credited with having launched the 'marginal' revolution in economics paving the way for the transition from classical to neo-classical economics. In his later years, Von Mises, who was a fierce proponent of the free market, participated in the 'calculation' debate about the economic feasibility of socialism (see Lavoie, 1985), and it was in this context that he wrote *Bureaucracy*. Like his contemporary Friedrich von Hayek, whose *Road to Serfdom* is now more frequently cited, Von Mises argues that the growth of the state and thereby of state bureaucracy undermines individual freedom. Never one to knowingly understate his case he goes so far as to suggest that 'the struggle against the encroachments of bureaucracy is essentially a revolt against totalitarian dictatorship' (Von Mises, 1944: 18). Yet Von Mises also develops a more nuanced economic argument about the nature of bureaucratic decision-making upon which Niskanen draws directly.

Von Mises (1944: 47) defines as bureaucratic any organization which 'specialises in the supply of those services the value of which cannot be exchanged for money at a per-unit rate'. Private-sector firms

Box 6.1 Market failure

The first fundamental theorem of welfare economics holds that perfect markets generate Pareto-optimal results (Stiglitz, 1996: 27–43). Market failures arise when markets fail to efficiently provide or allocate goods and services, and economists have identified a number of different sources of market failure (see Stevens, 1993: 55–74 for a more detailed discussion):

- 1 *Public goods*. Individuals will not find it in their interest to contribute to the provision of non-excludable and non-rival public goods or to limit their consumption of non-excludable but rival common pool goods (5.1).
- 2 *Externalities*. Self-interested individuals will not find it in their interest to take account of the positive or negative consequences of their actions on others. As a result, competitive markets over-supply those goods which generate negative externalities harming others and under-supply those goods which generate positive externalities benefiting others. As an example of a negative externality, consider the smoke emitted by a factory which damages the sheets left out to dry in a neighbouring garden. Unless they are liable for compensation, the owner of the factory has no incentive to take account of that damage. As an example of a positive externality, consider the benefits a passer-by might derive from looking at the flowers in someone else's front garden.
- 3 *Monopoly and imperfect competition*. Monopolists find it in their interest to raise price and restrict supply so reducing consumer welfare.

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operate within competitive or at least 'contestable' (Baumol *et al.*, 1982) markets and sell units of their output at a specified price. Public-sector bureaucracies operate outside of the market and provide particular goods and services in exchange for budgets granted by their political patrons. Such organizations, Von Mises suggests, find themselves effectively exempted from the demands of economic calculation and are, as a result, usually inefficient. Bureaucratic management is 'wasteful, inefficient and slow' because bureaucrats only care about taking those decisions which are consistent with established rules and precedents (Mises, 1944: 48). This was an important argument because it tied already well-established claims about the inefficiency of public-sector bureaucracies to the underlying economic position of those bureaucracies rather than the personal failings of individual bureaucrats.

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- 4 *Inadequate information.* In those situations where individuals cannot easily judge the quality of the service or veracity of the advice they are being offered, producers can exploit their customers. Consider the position of, for example, a patient who is told by their dentist that they need a filling. How can they know whether the dentist is saying this because they really do need a filling or because they can make an additional profit by charging for it?
 - 5 *High transaction costs.* Markets fail when the costs of deciding, planning, arranging, negotiating and enforcing exchanges are greater than the benefits to be derived from that exchange.
 - 6 *Inequality.* Some economists would argue that markets fail if and when they generate severe inequalities in income.
 - 7 *Demand and supply.* Keynesian economists argue that markets fail because there is no mechanism to ensure equilibrium between total demand and supply. In such cases, market allocation leads to periodic recession and unemployment.

Welfare economists maintain that market failure justifies government intervention to, for example, break-up or nationalize monopolies, provide public goods or correct for externalities. Rational choice theorists argue that welfare economists have shown how and why the market might sometimes fail but have simply asserted rather than demonstrated the ability and willingness of the state to correct those failures. In comparing the virtues of the state with those of the market, welfare economists make a misleading comparison between the reality of imperfect markets and the fiction of a perfect state. Voting cycles, budget-maximization and rent-seeking also lead to government failure.

Gordon Tullock, who once worked as a senior official in the American State Department, published *The Politics of Bureaucracy* in 1965. He argues that the crucial feature of bureaucracies is not simply that they are hierarchies, but 'pyramidal' hierarchies with fewer people at the top than in the lower ranks (Tullock, 1966: 33). The relationship between junior and senior bureaucrats is one of principal and agent (Box 6.2). Bureaucracies work efficiently to the extent that bureaucrats in junior positions pass on the 'right' information to their superiors. Once this information has been collated, those at the top of the pyramid are then meant to reach a decision which is communicated back down the pyramid before being implemented by those at the bottom.

The first problem with this account, Tullock argues, is that the pressures on those at the top of the pyramid are such that very little useful information can actually be passed on to them before a decision is

Box 6.2 Principals and agents

A principal-agent relationship arises when one person, the principal, contracts with another person, the agent, to undertake tasks on their behalf. P-A relationships are a pervasive feature of life. Employers hire employees; homeowners sign contracts with estate agents to market their house; and patients pay doctors to diagnose and treat their illnesses. Within the political arena, voters select representatives to represent their interests; in parliamentary systems representatives then select governments; and governments must then rely upon bureaucrats to implement their policies. For two reasons, economists generally expect P-A *relationships* to generate P-A *problems*. First, principals usually have incomplete information; they cannot know, or can only find out at a great cost, whether agents are acting in the way that they would want them to act. Second, agents will not necessarily act in their principal's interests unless induced to do so; agents have conflicting interests whether in 'shirking' or in pursuing their own policy preferences.

P-A problems can be managed in a number of ways. (1) Principals can devise contracts that link an agent's payment to their performance. But if this performance depends upon the agent's effort *and* some random variable then risk-averse agents may well require higher overall payments to compensate for the resulting uncertainty. (2) Agents can sometimes be deterred from shirking by principal's threats to terminate their relationship if performance falls below some level. (3) P-A problems will be most acute in short-term relationships. By offering agents the prospects of entering into long-term relationships, agents can be

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made. Precisely because there are so few people at the top of the pyramid, only a tiny fraction of what each junior bureaucrat knows can possibly be known by those senior bureaucrats making decisions. The second problem with this account is that it ignores the potentially conflicting interests those in subordinate positions have. Junior bureaucrats have an interest in impressing their superiors and those superiors have an interest in impressing their superiors and so on. Most bureaucrats will therefore filter any information they receive and only pass on that part of it which they believe shows them in a good light or which their superiors want to hear. Rather than information being passed up the pyramid, this means that 'factual information tends to flow from the top down instead' (Tullock, 1965: 70). Each bureaucrat will have more interest in finding out what their superiors think about particular issues than they will in finding out about what is happening in the outside world.

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given an incentive to acquire a reputation for being trustworthy (Radner, 1981) (Box 5.4). (4) Through the design of careful selection procedures principals may succeed in hiring agents who share and so naturally pursue their interests. It is, however, unlikely that principals will be able to (or want to) eliminate P-A problems. This is because it may well cost the principal more to eliminate the P-A problem than they gain from doing so. In such cases the existence of some agency costs may well be economically efficient.

Principal-agent analysis has recently been applied to the study of bureaucracy in a number of different ways. Jonathan Bendor and Adam Meirowitz (2004) show that the existence of a P-A problem between bureaucrats and legislatures does not hinge upon the assumption that bureaucrats are risk-adverse. Michael Ting (2003) shows how bureaucratic 'redundancy' – the allocation of the same functional responsibilities to several bureaucracies – can help a principal achieve their goals when bureaucratic agents have conflicting preferences but can, in other circumstances, generate debilitating collective action problems. Nolan McCarty (2004) suggests that the separation of powers in the American political system can exacerbate the P-A problem in so far as it sometimes gives the Executive an incentive to appoint senior bureaucrats with very different policy preferences from the median Congressman and Congress an incentive to then starve that bureaucracy of funding. Finally, John Huber and Nolan McCarty (2004) suggest that low bureaucratic 'capacity' in developing countries can lower the incentive bureaucrats have to comply with legislation so reducing the incentive politicians have to delegate tasks to them.

Problems of this sort mean that bureaucracies are generally extremely inefficient. They usually 'accomplish something, but [they] will not perform the task for which they are designed' (Tullock, 1965: 97). The solution, Tullock argues, is to rely less upon the state and more upon the market and private firms. The market is, as he acknowledges, an imperfect mechanism for allocating resources. Individuals will make poor decisions about which products to make and this will result in resources being wasted. But the market does not require information to be centralized before decisions are made and gives participants an incentive to take those decisions they believe are right rather than those decisions they believe their superiors will approve of.

Anthony Downs' (1967) *Inside Bureaucracy* also examines the flow of information within and political control over public bureaucracies. In Downs' work, this results in the formulation of a series of 'laws' such as the 'law of diminishing control' and the 'law of counter-control'. The

most interesting aspect of Downs' work, and the one which Niskanen most obviously draws upon, is however his discussion of bureaucratic behaviour. Bureaucrats, Downs (1967: 2) argues, are often self-interested and are always rational utility-maximizers. They do not, however, always behave in the same way. There are instead five behavioural types (Downs, 1967: 88–111):

- 1 'Climbers' who maximize their power, income and prestige by securing promotions or acquiring additional responsibilities in their existing jobs.
- 2 'Conservers' who maximize their security by defending their existing responsibilities but minimise their effort by avoiding additional ones.
- 3 'Zealots' who develop a consummate commitment to the policy area they work in and promote its expansion.
- 4 'Advocates' who defend the interests of their department or agency in the belief that they can serve their clients' interests by doing so.
- 5 'Statesmen' who have a broader commitment to the public interest.

In terms of connecting Downs' argument to that of Niskanen's, two points are worth making. The first and most obvious one is that Downs' 'climbers' and Niskanen's 'budget-maximizers' appear to be cut from the same cloth. The second draws us back to the discussion of *An Economic Theory of Democracy*. Downs's argument about the behaviour of political parties was, it will be recalled, inspired by Joseph Schumpeter's insight that public policy is the by-product of, rather than the motive for, party competition. In the case of two of his five behavioural types, Climbers and Conservers, Downs argues that the implementation of public policy is, in the same way, a by-product of the individual pursuit of self-interest. In *Bureaucracy and Representative Government* Niskanen adopts the same basic approach. Public policies are provided not because it is in the public interest that they are provided but because it is in bureaucrat's self-interest to provide them.

The budget-maximizing bureaucrat

William Niskanen (1933–) completed his doctorate in economics at the University of Chicago. Having worked for a time at the Rand Corporation, he joined the staff of the incoming Secretary of State for Defence, Robert McNamara, following John F. Kennedy's election in

1960. Having subsequently chaired President Reagan's Council of Economic Advisors, he was appointed as Chairman of another think-tank, the Cato Institute, in 1985. In the preface to *Bureaucracy and Representative Government*, Niskanen writes that whilst working at the Rand Corporation he shared the general assumption of his colleagues that bureaucratic inefficiency could be ameliorated if not eliminated through the introduction of improved information systems. It was his time working at the Department of Defence which convinced him that this was not so; that 'there is nothing inherent in the nature of bureau's and our political institutions that leads public officials to know, seek out, or act in the public interest' (Niskanen, 1971: vi).

Niskanen's argument in *Bureaucracy and Representative Government* can be broken into two parts: the behavioural assumption and the equilibrium argument. The behavioural assumption is that public sector bureaucrats find it in their interests to try and maximize the size of their budget. The equilibrium argument is that they usually succeed in doing so.

The behavioural assumption

Within neo-classical economic theory it is assumed that entrepreneurs are profit-maximizers. Bureaucrats cannot, by definition, be profit-maximizers because Niskanen (1971: 15), drawing heavily upon Von Mises, defines bureaucracies as non-profit-making organizations whose revenues derive from periodic grants. So what is it that self-interested bureaucrats maximize? Niskanen follows Downs in assuming that bureaucrats value a range of goods including power, monetary income, prestige and security. Yet he cuts through the complexities of Downs' argument by suggesting that nearly all of these variables are positively related to the size of the bureaucrat's budget:

Among the several variables that may enter the bureaucrat's utility function are the following: salary, perquisites of the office, public reputation, power, patronage, output of the bureau, ease of making changes and ease of managing the bureau. All of these variables except the last two, I contend, are a positive monotonic function of the total *budget* of the bureau during the bureaucrat's tenure in office. (Niskanen, 1971: 38; emphasis in original)

The fact that two of the factors Niskanen mentions, the ease of making changes and the ease of managing the bureaucracy, are *not* related to

the size of budget may seem to fatally compromise his argument. For if some bureaucrats – and at this point, Downs' Conservatives spring to mind – value ease of management over power, patronage and higher salaries, they will not budget-maximize. Yet Niskanen's argument is, at this point, actually quite a subtle one. For whilst accepting that bureaucracies with larger budgets are harder to manage and reform, he argues that budget increments can, in the short-term at least, nevertheless make a bureaucrat's life easier. This, he suggests, 'creates a treadmill phenomenon, inducing bureaucrats to strive for increased budgets until they can turn over the management burdens of a stable higher budget to a new bureaucrat' (Niskanen, 1971: 38).

Niskanen's argument about budget-maximizing ought to be seen in the context of an existing debate within economics. In the 1950s and 1960s a number of economists began to argue that the rise of the giant corporation had rendered the assumption of profit-maximization redundant. Salaried managers with no stake in the ownership of a firm had, it was argued, no real incentive to maximize their employer's profits. But what did managers maximize if not profits? The alternatives canvassed at this time included the number of staff, autonomy from shareholders, and perks such as overseas conferences and plush offices. But as William Baumol (1959) first observed, many of these variables are positively related to the size of the corporation. For this reason, managers will, he argued, be growth-maximizers. In response, critics argued that whatever it is that managers may *want* to do, the discipline of market competition and the need to retain the confidence of shareholders actually gives managers no alternative but to maximize profits. But, as Niskanen grasped, whether or not this is true, the same discipline does not exist within the public sector where there is no requirement to return a profit and no guarantee that those who succeed in cutting costs will actually be rewarded:

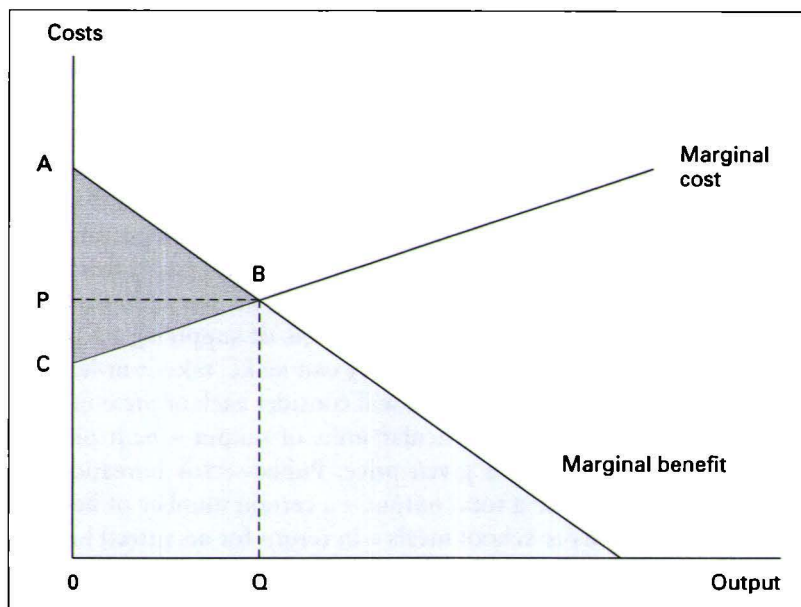
The rationality of budget maximization by bureaucrats may best be illustrated by considering the consequences of contrary behaviour. Consider the probable consequences for a subordinate manager who proves without question that the same output could be produced at, say, one-half of the present expenditures. In a profit-seeking firm this manager would probably receive a bonus, a promotion, and an opportunity to find another such economy . . . in a bureau, at best, this manager might receive a citation and a savings bond, and the suspicion of his new colleagues. Those bureaucrats who doubt this proposition and who have good private employment alternatives should test it . . . once. (Niskanen, 1971: 38)

The equilibrium argument

At some point in the budgetary cycle, senior bureaucrats submit budget requests to their political patrons in government. Bureaucrats will want to acquire as large a budget as possible. Politicians will have some interest in resisting their demands. Niskanen (1971: 64) argues that the resulting negotiations conclude with public bureaucracies supplying 'an output up to twice that of a competitive industry faced by the same demand and cost conditions'. So what advantage do bureaucrats have over politicians which allows them to inflate budgets in this way? Niskanen offers two answers to this question. The first is that bureaucrats have more information about the costs of supplying particular levels of output. The second is that they can make 'take-it-or-leave-it' offers to their political patrons. We will consider each of these in turn.

Private-sector firms sell particular units of output – be it pints of milk or ocean liners – at a given price. Public-sector bureaucracies instead offer to provide a total output – a certain number of hospital beds, army divisions or school meals – in return for an agreed budget. In bargaining about the level of budget and output, Niskanen credits politicians with the possession of four powers or capacities. The first is that of selecting the overall level of output to be produced. This means that bureaucrats cannot budget-maximize by simply selecting a level of output requiring an enormous budget. The second is ensuring that bureaucrats fulfil any promises they make about the level of output they will deliver in return for an agreed budget. This means that bureaucrats cannot budget-maximize by promising to, for example, provide one hundred hospital beds in return for a budget of one million pounds even if they know that they cannot achieve this. The third is ensuring that the total benefits individuals derive from consuming whatever output it is that the bureaucracy provides are equal to or greater than the total costs of providing it. This means that bureaucrats cannot budget-maximize by setting a budget which is so high that the costs of the resulting output exceed its benefits. The fourth is that of ensuring that the marginal benefits of any output are not negative. I will say more about this final condition presently.

The existence of these capacities implies that politicians have access to detailed information about bureaucratic output and costs. Politicians need to know a great deal in order to know when the total costs of providing a particular level of output will exceed the total benefits individuals derive from consuming it. Yet Niskanen critically assumes that *only* bureaucrats know what the minimum costs of

Figure 6.1 *The profit-maximizing firm*

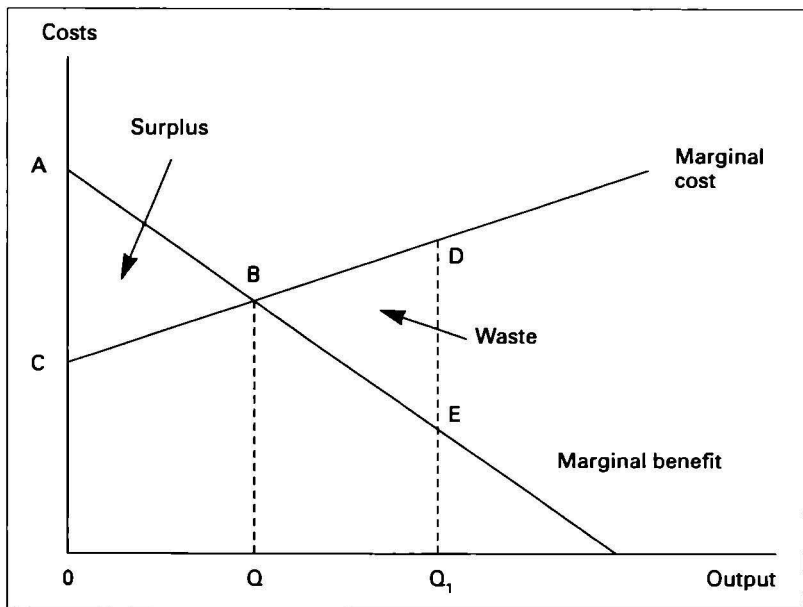
producing particular levels of output are. When a senior bureaucrat tells a politician that it will take a certain level of budget to provide a certain level of output, the politician will not know whether it would be possible to provide that level of output at a lower cost. Because bureaucrats know that politicians do not know what the minimum costs of producing various levels of output are, they can budget-maximize.

Niskanen's second argument is that bureaucrats can inflate their budgets by making 'take-it-or-leave-it' offers. In Figure 6.1 the quantity of some good which is being produced is shown on the horizontal axis and price and cost on the vertical axis. Notice that the marginal benefit consumers derive from the consumption of a good (from which can be derived the demand curve) decline as output increases and that marginal costs (from which can be derived the supply curve) increase as production costs rise. Economists generally argue that profit-maximizing firms will produce additional units of output up to that point at which the marginal benefits of doing so are equal to marginal costs. In Figure 6.1 such a firm will therefore produce output Q at price P. At this equilibrium total consumer 'surplus'—which measures the difference between what some consumers have paid for the good and the

amount they would have been willing to pay – is shown by the shaded area A–B–C.

How much will a budget-maximizing bureaucracy produce? We will follow Niskanen in *initially* assuming that politicians accurately represent individuals' demand for particular goods and services and that the marginal benefit schedule for a bureaucratically-produced good is therefore the same as it is for a privately-produced one. Assume now that bureaucrats can make take-it-or-leave-it offers; in other words that they can offer to produce a certain level of output in return for a certain budget and credibly threaten not to produce *anything* if this request is rejected. In Figure 6.2 assume that bureaucrats demand a total budget of 0–C–D– Q_1 in return for a promise to produce output Q_1 . This budget corresponds to the *total* costs of producing output Q_1 , that is a total output of the area 0–C–D– Q_1 . This budget and output combination is clearly sub-optimal because the marginal costs of producing output Q – Q_1 are greater than the marginal benefits. In this particular case the resulting 'waste' B–D–E is exactly equal to the surplus A–B–C. This is in fact the equilibrium output because if bureaucrats were to ask for a larger budget total waste would be greater than the total surplus.

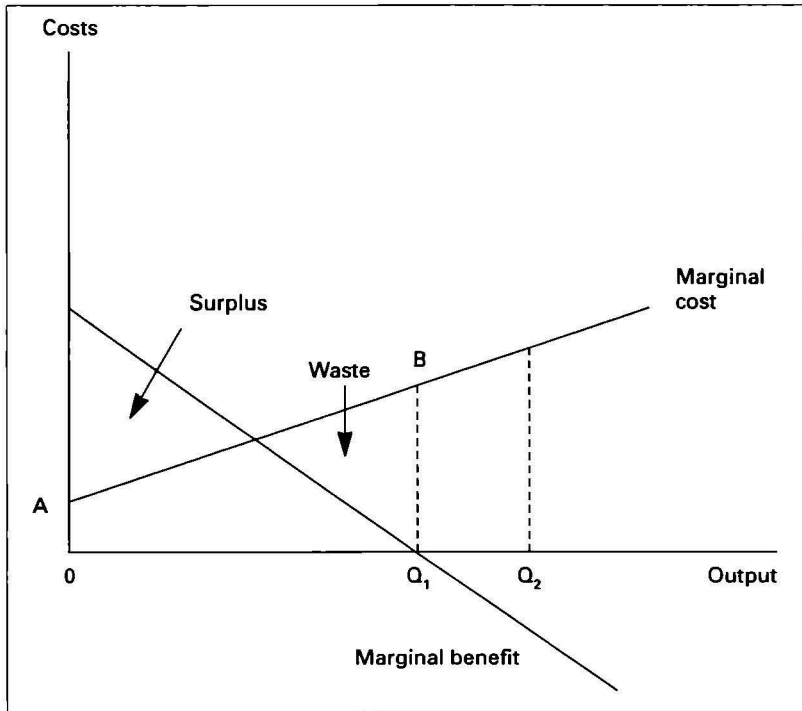
Figure 6.2 *The budget-maximizing bureaucrat*



Faced with a take-it-or-leave-it offer, the vote-maximizing politician would have good reason to reject such an offer because at this point they would prefer zero output with zero benefits and costs to an output whose costs were greater than its benefits. If, on the other hand, the bureaucrat were to ask for a budget of less than this amount, consumer surplus would be greater than total waste and the politician would accept the budget offer. Yet bureaucrats will not make such a budget offer precisely because they could ask for and receive more.

Figure 6.2 shows the standard situation of what Niskanen calls a 'budget-constrained' bureau. As a footnote to this argument it is worth noting that Niskanen also discusses the position of what he calls a 'demand-constrained' bureau. In Figure 6.3 the marginal benefits and benefits of producing this good are lower. If this bureau were to produce that level of output at which total surplus equalled total waste it would produce Q_2 . But notice that the marginal benefits of some

Figure 6.3 *The demand-constrained bureau*



units of this output – those between Q_1 and Q_2 – would then actually be negative. In his information-based argument, Niskanen suggests that politicians will know enough about the costs and benefits of bureaucratic output to prevent this from happening. Politicians will refuse any budget demand some of whose output generates negative marginal benefits. The equilibrium output of this bureau will therefore be Q_1 and its total budget $0-A-B-Q_1$. We will return to some of the implications of this argument presently.

What are we to make of Niskanen's arguments? The idea that bureaucrats possess more information than their political patrons is a venerable one. It can be found not only in Tullock and Downs' economic theories but in, for example, Max Weber's sociological analysis (see Beetham, 1987). The claim that bureaucrats can make 'take-it-or-leave-it' offers appears, on the other hand, entirely fanciful. Niskanen defends it by suggesting that these two arguments have the same consequences; it makes no difference whether it is assumed that bureaucrats can make take-it-or-leave-it offers or whether only bureaucrats know what the minimum costs of producing certain levels of output are. By implication, the assumption that they can make take-it-or-leave-it offers can be regarded as little more than a presentational device and defended on the instrumentalist grounds that theories ought to be judged in terms of the accuracy of their predictions rather than the realism of their assumptions (Niskanen, 1971: 191). This suggestion seems implausible because there is one very obvious difference between these two arguments. In the information-based argument politicians choose the level of output to be produced. In what might be called the blackmail argument, that bureaucrats can make 'take-it-or-leave-it' offers, this responsibility is however given to bureaucrats. Yet in *both* cases, the limits placed upon bureaucrat's capacity to budget-maximize derive from the assumption that politicians know enough to prevent the total costs of bureaucratic output exceeding its total benefits. In the case of the information-based argument this assumption stops bureaucrats extracting too large a budget in return for any specified output. In the case of the blackmail argument, this assumption provides the cut-off point beyond which politicians will reject any budget demands.

Evaluating the behavioural assumption

In one of the first published critiques of *Bureaucracy and Representative Government*, Jean-Luc Migue and Gerard Belanger

(1974) argued that bureaucrats maximize not the size of their budget *per se*, but the size of their discretionary budget which they define as the difference between the total budget and the minimum costs of producing the output expected by the bureau's sponsor. Although this discretionary budget cannot be appropriated as personal profit by the bureaucrat, it can, Migue and Belanger argue, be used to secure greater power, patronage, prestige, and so on. In a formal reassessment of his work, Niskanen (1991) has now accepted their argument and suggested that he was always uncomfortable with the behavioural assumption that bureaucrats are budget-maximizers. This concession might, however, be regarded as entailing a revision to, rather than a repudiation of, the original budget-maximizing argument.

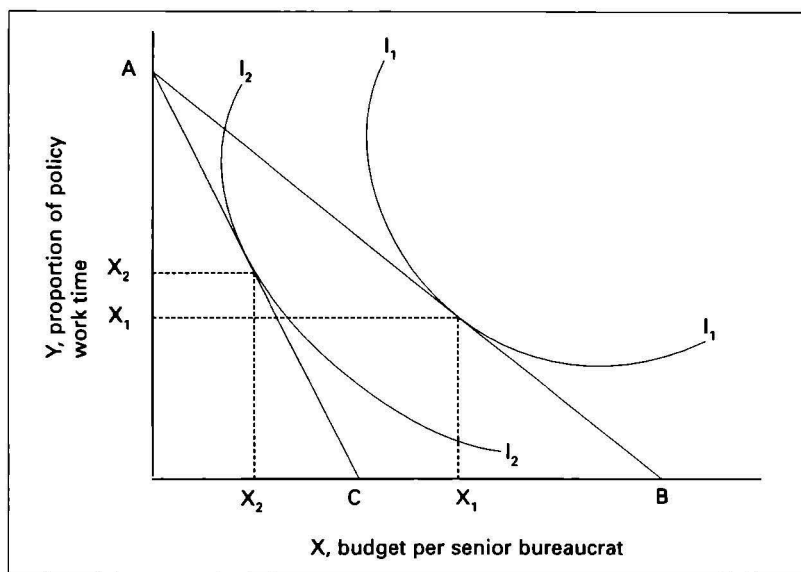
The claim that bureaucrats want to maximize their discretionary income is, after all, still consistent with the underlying claim that bureaucrats are self-interested actors who attempt to maximize their salary, prerequisites of the office, public reputation, power and patronage. In a sense, all Niskanen is now arguing is that bureaucrats are more likely to achieve these goals by maximizing their *discretionary* budget. Furthermore, this concession does not significantly affect Niskanen's overall conclusion that bureaucracies are inefficient. It does, however, alter the details of that argument. If bureaucrats maximize their total budget then, as we have seen, output will be too large. If bureaucrats maximize their discretionary budget then, depending upon the particular cost conditions, output may be either too large or too small (Niskanen, 1991: 22). But whether bureaucrats maximize their total budget or their discretionary budget, the bureau's budget will still be too large. Indeed, Niskanen suggests that the position of a bureaucrat maximizing their discretionary budget is very similar to that of a budget-maximizing bureaucrat in a demand-constrained bureau.

In the case of a budget-constrained bureau (Figure 6.2), the bureau produces too much but is efficient in the limited sense that the total costs of the bureau are exactly equal to the total benefits of its production. So although the bureau is producing more than is optimal, there is no 'fat' in the budget and a detailed cost-benefit analysis will not reveal any scope for budget savings. In the case of a demand-constrained bureau (Figure 6.3), where there is a limit on the amount which can be produced, bureaucrats have an incentive to create budgetary slack and so inflate the overall size of their budget. A bureaucrat seeking to maximize the size of their discretionary budget has, Niskanen argues, exactly the same incentive.

The most interesting and plausible alternative to the assumption that bureaucrats maximize their discretionary income is that they are 'bureau-shapers'. Patrick Dunleavy (1985, 1991) argues that senior bureaucrats care more about the kind of work they do than their terms and conditions. Bureaucrats prefer innovative work with longer time horizons and high discretion over routine work with short time horizons and low discretion; small-sized work units with cooperative working relationships over large-sized units with coercive work relationships; and work which entails proximity to political power centres and confers high-status social contacts to work in regional locations conferring low-status contacts (Dunleavy, 1991: 202). Senior bureaucrats will sometimes be able to achieve these goals by applying for new jobs or redefining their existing ones. At other times they will, however, act collectively to off-load or contract-out unattractive parts of their work. Far from attempting to maximize their budget and output, 'bureau-shaping' bureaucrats will sometimes welcome budget cuts.

Dunleavy presents bureau-shaping as a behavioural alternative to budget-maximizing. Oliver James (1995, 2003) suggests that senior bureaucrats may derive utility from both increases in their budget *and* interesting policy work and that changes in bureaucrat's behaviour can be explained in terms of changes in the relative 'prices' of these two activities. In the 1980s governments across the world committed themselves to reducing public expenditure. This change in the external environment effectively raised the 'price' of budget-maximizing in the sense that investments by senior bureaucrats in efforts to increase their budget began to generate a lower return. Bureaucrats reacted rationally to this by placing a greater value upon policy work. It is for this reason, James argues, that British Civil Servants welcomed, against all expectations, the government's 1988 proposals to split the Civil Service into a series of semi-autonomous 'Next Steps' agencies tasked with delivering services and a relatively small number of core departments focused upon policy advice.

A formal version of this argument is provided in Figure 6.4. Here, the preferences of senior bureaucrats over policy work and budget are shown in two indifference curves I_1 and I_2 . Each of these curves show combinations of budget and policy work between which bureaucrats are indifferent. Whilst bureaucrats derive equal utility from any point on I_2 , they prefer any point on I_1 to any point on I_2 . Given the external constraint imposed by politicians (A–B) who set limits on both the total budget and the amount of time spent on policy advice, bureaucrats maximize their utility by choosing that combination of budget

Figure 6.4 *The bureau-shaping bureaucrat*

Source: James (2003), p. 20.

and policy work which falls on the highest possible indifference curve. In Figure 6.4 this combination is one in which bureaucrats receive a budget of X_1 and spend Y_1 of their time on policy work. The cut-back management pursued in the 1980s manifests itself in a shift in the political constraint from A–B to A–C. At this point it requires a greater sacrifice of policy work in order to secure any given level of budget. Bureaucrats must now maximize their utility by spending a larger proportion of their time, Y_2 , on policy work in return for a significantly lower budget of X_2 .

Evaluating the equilibrium argument

One way in which the equilibrium argument might be defended is in terms of the instrumentalist claim that the accuracy of a model's predictions matter more than the realism of its assumptions. In Niskanen's case, the most significant prediction is of course that bureaucracies 'supply an output up to twice that of a competitive industry faced by the same demand and cost conditions'. In assessing the strength of this

prediction the first point to make is that *Bureaucracy and Representative Government* does not itself contain any tests of this prediction or even any indication of how it might be tested. The second point to make is that there is, however, plenty of evidence that private firms are *usually* able to run various services including airlines (Davies, 1981), bus services (McGuire and Van Cott, 1984) and nursing homes (Freech, 1985) more cheaply than their public and bureaucratic counterparts (see Mueller, 2003: 373–9 for a more detailed review). This may well tell us something significant about the differences between the public and private sector although it may of course only tell us that private firms pay lower wages and offer fewer employment rights than public bureaucracies. The most important point to make here, however, is that this kind of evidence does not really bear upon the prediction Niskanen is making about the behaviour of public bureaucracies and private firms. Indeed it must be doubted whether any test of his prediction is possible.

Niskanen suggests that public-sector bureaucracies will ‘supply an output up to twice that of a competitive industry faced by the *same* demand and cost conditions’ (emphasis added). Yet because demand for the goods supplied by public bureaucracies is transmitted through political mechanisms like voting and logrolling (see pp. 167–71), demand and cost conditions for such goods are *not* the same as they are for goods produced by privately-owned firms in competitive markets (Dowding, 1995: 48–50). Recall, in this context, Arrow’s argument that the results of attempts to aggregate individual preferences will depend upon the method of aggregation used. Even *if* individuals have the same preferences for goods and services as voters as they do as consumers, the aggregate benefit schedule of a bureaucratically-produced good may nevertheless differ from a privately-produced one because of the way in which these preferences are aggregated. At a more prosaic level, demand and cost conditions will also vary because governments routinely require public bureaucracies to provide and produce goods and services in particular ways. Governments often require public bureaucracies to provide the same level of service in remote, rural, areas as they do in metropolitan ones, or to purchase their capital equipment, particularly information technology, from national firms. For these reasons, private firms and public bureaucracies may indeed have different budgets and produce different levels of output. But this could be because public bureaucracies budget-maximize, because they face different demand and cost conditions, or both.

A second way in which the equilibrium argument might be defended

is in terms of the plausibility of its assumptions. The claim that bureaucrats can make take-it-or-leave-it offers is, in this respect, a non-starter. But what of Niskanen's claim that bureaucrats possess and exploit a significant information advantage? As I have already indicated, this is a more plausible argument. Indeed it would be surprising if bureaucrats did not have more information about costs and outputs and the relationship between them given that in most government departments there are usually several hundred bureaucrats for every one politician or political advisor. Yet some of the specific claims Niskanen makes about the relationship between bureaucrats and politicians are nevertheless problematic.

Niskanen's work was inspired by his experiences working in America and his model assumes that responsibility for setting and monitoring budgets is exercised, as it is in America, by legislative committees. At the time Niskanen was writing, in the early 1970s, it was a conventional piece of American political science wisdom that these committees were relatively ineffectual (see Clark, 1964). To this extent, his argument was a controversial one not so much because of what he said about the unequal relationship between bureaucrats and politicians but because of the way in which he said it. In the 1980s, however, this conventional wisdom was challenged. American political scientists operating within or on the edges of the rational choice paradigm began to argue that Congressional Committees actually 'dominate' the bureaucracy (see Shepsle and Weingast, 1994 for a general review).

- 1 Romer and Rosenthal (1978) and Bendor *et al.* (1985) suggest that politicians can control bureaucrats and prevent budget-maximizing by setting reversion budgets which bureaucrats will be forced to accept if their budget demands are rejected. If reversion budgets are set correctly, bureaucrats can be deterred from making excessive demands.
- 2 Miller and Moe (1983) suggest that politicians can effectively trick bureaucrats into revealing detailed information about minimal costs by asking them how much output they would be willing to provide at various per unit prices. In this way politicians can build-up a detailed picture of the bureaucrat's supply curve. To the extent that this requires bureaucrats to reveal information politicians can then use to cut their budgets, this is implausible. Bureaucrats would surely attempt to mislead politicians about costs. But as Miller and Moe observe, their argument is no more implausible than assuming,

as Niskanen does, that politicians will accept bureaucrat's budget demands so long as total benefits are greater than or equal to benefits.

- 3 Congressional Committees cannot monitor and control bureaucratic performance by undertaking detailed 'patrol' exercises entailing the collection and analysis of huge amounts of information about costs and output. As McCubbins and Schwartz (1984) observe, they do not however need to do so. Legislative Committees can instead rely upon 'alarms' raised by constituents and interest-groups to tell them when a bureaucracy is performing ineffectively.
- 4 McCubbins, Noll and Weingast (1987, 1989) argue that Congressional Committees control bureaucracies by setting their administrative rules and standard operating procedures. Consider, for example, the rule requiring agencies to give public notice of any intention they might have of changing the way some legislative policy is interpreted. This rule gives affected groups the opportunity to express any concerns they might have to the relevant Congressional Committee and that Committee the information necessary to then challenge the agency's decision.
- 5 Weingast and Moran (1983) observe that Congressional Committees have the formal power to hire and fire senior bureaucrats, 'ring-fence' particular investments and hold investigations and public hearings into an agency's performance. This, they argue, will usually be sufficient to ensure that bureaucrats abide by politicians' preferences.

In recent years, the Congressional Dominance thesis has itself been subjected to criticism. One argument here is that politicians will often be reluctant to use the powers that they have. Politicians will not want to cut budgets or launch public hearings because the former would harm their constituents and the latter would generate too much adverse publicity. A second argument draws upon the existence of voting cycles. Bureaucrats will sometimes be able to evade political control because whilst a majority of the politicians on some Committee may have instructed the bureaucracy to behave in a particular way, another majority, composed of a different set of politicians, may nevertheless prefer the bureaucracy's chosen course of action to that mandated by the Committee (Hammond and Miller, 1985). Finally, it has been argued that politicians will sometimes find it in their interests to grant a great deal of discretion to quasi-autonomous agencies because by doing so they can make it harder for subsequent administrations to

reverse their policy decisions (Horn, 1995: 10–18). Yet even if we want to draw back from describing Congressional Committees as being dominant, it is difficult to see how they might reasonably be portrayed as being as weak as Niskanen suggests.

In introducing the equilibrium argument we followed Niskanen in assuming that politicians accurately represent voters' demand for particular goods and services. Congressional 'dominance' would, to the extent that the thesis is correct, therefore seem to be a good thing. Yet it is worth briefly noting that Niskanen (1975) argues that members of Congressional Committees *themselves* favour higher public expenditure than either the median member of Congress or the median voter. This is because politicians will often sit on those committees whose policy remits are of the most immediate relevance to their constituency. Politicians from rural areas will therefore dominate the Committee on Agriculture and vote for larger farm subsidies whilst politicians with large military bases in their constituency will dominate the Committee on Armed Services and vote against defence cuts. As a result, bureaucrats are sometimes pushing at an open door when they demand higher budgets. For this reason we cannot conclude that Congressional dominance necessarily prevents budget-maximizing.

Whatever we conclude about the effectiveness of American Congressional Committees, it is worth emphasizing that in Australia, New Zealand, Japan and most European countries, the primary responsibility for budget control is exercised by finance ministries rather than legislative committees. Because these ministries are large, politically powerful and usually staffed by former bureaucrats, they are in a far stronger position to collect information about minimum costs than Congressional Committees. There is, in this respect, a related point to make about the parochialism of Niskanen's argument. In the American public service, senior positions are usually filled by political appointees serving no more than four years, whilst in most European countries these positions are filled by career bureaucrats. As Guy Peters (1991) suggests, American bureaucrats may feel under a particular pressure to secure large budget increases in order to make an immediate impact in their work. European bureaucrats, especially those who expect to be rotated between departments, may have less interest in budget-maximizing.

Bureaucracy and Representative Government may, for these reasons, tell us more about the relationship between bureaucrats and politicians in American than it does in the rest of the world. This may not, however, be all. For it may be that *Bureaucracy and*

Representative Government only really tells us something about the relationship between bureaucrats and politicians in one particular American department during one particular period. Niskanen's work was, it will be recalled, inspired by his experiences working in the Department of Defense, yet this is hardly a typical department. The sheer size of the Pentagon together with the inter-service rivalries which stymie its decision-making, make this a particularly difficult bureaucracy for politicians to control (see the comments in Woodward, 2004: 15–18). One way in which such difficulties manifest themselves is in cost over-runs in procurement programmes (Farrell, 1997: 161–7). Yet it is not immediately clear that this constitutes evidence of budget-maximizing. After all, these cost over-runs have been incurred on programmes in which private firms like General Dynamics and Boeing have been contracted to provide particular weapons systems.

Niskanen's work was inspired not simply by his experiences working in the Department of Defense, but his experiences working there in the 1960s. Having been accused of being soft on defence during his Presidential campaign against Richard Nixon, Kennedy entered office in 1961 determined to establish more hawkish credentials (Giglio, 1991: 45). He did this partly by continuing to sponsor or at least turn a blind eye to the CIA's attempts to assassinate Fidel Castro in the aftermath of the Bay of Pigs Fiasco (see Freedman, 2000: 123–39). He also did it by authorizing significant increases in defence expenditure during his first two years in office. Against this background, it is perhaps not surprising that Niskanen's then colleagues in the Pentagon should have seemed so keen to maximize their budgets. But we cannot simply assume that conditions which held in the 1960s continued to hold during later periods. Indeed, as Robert Goodin (1982) observes, new institutions like the Congressional Budget Office and new Budget Committees in both the House of Representatives and Senate made budget-maximizing much more difficult in the very different political and economic climate of the 1970s.

Assessment

In the concluding chapters of *Bureaucracy and Representative Government*, Niskanen (1971: 195–230) advances the merits of three reform proposals. The first is to give bureaucrats who reduce their budgets higher wages, a 'one-off' prize payment, or increased discretionary budgets. The second is to change the composition of

Congressional Committees in such a way as to make them more representative of the views of the median legislature. The third and most important is to ensure greater competition by requiring bureaucracies to compete either with each other or privately-owned firms to provide services. The first of these reforms is intended to reduce the incentive bureaucrats have to budget-maximize. The second is intended to increase the incentive politicians have to prevent budget-maximizing. The third is intended to force bureaucrats to reveal more information about the minimum costs of providing particular levels of output.

At a time when the New Right was in the ascendancy in both Britain and America (Cockett, 1995), *Bureaucracy and Representative Government* proved hugely influential. Having been popularized by think-tanks like the Institute of Economic Affairs (Niskanen, 1973), Niskanen's analysis, together with more general arguments about the limits of state planning (Hayek, 1982), the importance of 'hard' budget constraints (Kornai, 1980), and the dangers of 'government overload'

Box 6.3 'Reflexive' predictions in the social sciences

We can explain why someone acted in a particular way by identifying that action as being the instrumentally rational response in a particular situation. What, though, of prediction? If we think we know that someone is instrumentally rational can we predict how they will behave? In principle we should be able to do so. If I know that a politician wants to be re-elected and believes that they can gain additional votes by directly attacking the integrity of their opponent I can predict that their campaign will be a negative one. But there is a problem here. What political and social scientists say about the world usually makes no difference to that world. The print deadlines of the world's largest media organizations are not arranged to coincide with the publication of the *American Sociological Review* or the *British Journal of Political Science*. Just occasionally social science arguments do, however, gain popular currency and, in doing so, create the conditions for their own falsification. This is because social scientist's predictions are about humans and humans can react to the predictions made about them.

The predictions natural scientists make about the behaviour of tides, comets and lasers do not cause those tides, comets or lasers to behave any differently. The predictions social scientists make about bureaucrats, politicians and regulators can sometimes cause those bureaucrats, politicians and regulators to act differently. This is sometimes known as the traffic-jam problem. Assume that a social scientist finds a way of

(Brittan, 1975; King, 1975) and 'crowding-out' (Bacon and Eltis, 1976), contributed to the development of and provided a part of the justification for the New Public Management.

As it has been described by Christopher Pollitt (2002), New Public Management involves (i) a shift in the focus of management systems from inputs and processes to outputs and outcomes; (ii) a shift towards greater measurement of results; (iii) a preference for 'leaner', 'flatter' and more autonomous organizations; (iv) a substitution of contract or contract-like relationships for traditional hierarchies; (vi) a much greater use of market or market-like mechanisms for the delivery of public services; and (vii) a broadening and blurring of the frontier between the public and private sectors (see also Hood, 1991). In America, Britain, New Zealand, Australia, Canada and Sweden and, to a lesser extent, in France, Germany and the European Commission, the application of such ideas over the last twenty years has entailed privatization, contracting-out, the use of performance indicators and tighter budgetary control systems, and the creation of 'internal' markets and

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explaining and predicting where traffic jams will appear on a morning. They publish an impressive academic paper and are invited on to the radio to advise drivers which roads to avoid. Listeners heed the predictions and change their routes so causing traffic jams to appear elsewhere.

How does this apply to rational choice theory? Clearly the explanations and predictions rational choice theorists make about the world make a difference to that world. I have, for example, already argued that arguments about state failure provided intellectual ammunition and a burgeoning policy agenda for the New Right in the 1970s and 1980s. Yet critics would argue that such arguments amounted to self-fulfilling prophecies. In so far as they presented political actors as being entirely self-interested, they led actors to believe that everyone else was behaving in a self-interested way so encouraging them to behave in the same way (Stretton and Orchard, 1994). Recall here the argument about the nature of equilibrium. In the social sciences equilibrium is equilibrium of expectations; if everyone expects everyone else to drive on the right then everyone has a reason to drive on the right so making driving on the right the equilibrium outcome. If everyone expects everyone else to act in a self-interested way, then acting in a self-interested way might be an equilibrium strategy. By changing people's expectations, rational choice may actually change people's actions. In the case of the 'traffic-jam' problem, social science predictions create the conditions for their own falsification. In the case of rational choice theory, the predictions theorists made may have created the conditions for their own corroboration.

semi-autonomous executive agencies (see Pollitt and Bouckaert, 2000: 192–298 for detailed country-by-country reviews).

As a result of the spread of the New Public Management, many of the reforms first advocated by Niskanen have now been implemented. Bureaucrats' terms and conditions have been revised so as to reward them for controlling costs. Congressional Committees have now been restructured and responsibility for budget-setting given to separate House and Senate Committees. Ministers are now given far more information about costs and outputs (Aucion, 1991). Finally, privatization, contracting-out and the creation of internal markets have ensured greater competition. One way in which the social sciences differ from the natural sciences is in terms of their 'reflexivity' (Box 6.3). What social scientists say about the world can sometimes make a difference to that world. Niskanen's work offers a clear example of this phenomenon. Although *Bureaucracy and Representative Government* has come under sustained academic attack, and although Niskanen himself no longer maintains that bureaucrats are budget-maximizers, Niskanen's argument has nevertheless influenced the way in which bureaucracies are structured and public services delivered.

Chapter 7

Gordon Tullock, Rent-Seeking and Constitutions

Overview: Business firms and interest-groups are influential actors in the policy process. In 'The Welfare Costs of Tariffs, Monopolies and Theft', Gordon Tullock (1967) argued that the way in which they exercise this influence is economically crippling. Rent-seeking takes place when firms or interest-groups try to extract special privileges from government. Rent-seeking is damaging because it entails the expenditure of resources which might otherwise have been used to benefit consumers. In this chapter I outline Tullock's original argument and then explain why rent-seeking has proven to be such an influential theory. The rest of the chapter examines two questions. First, and given the claim that rent-seeking is pervasive, why is the rent-seeking 'industry' of lobbying firms, public-relations companies and lawyers so small? Second, and given the claim that rent-seeking is so damaging, how might it be reduced or even eliminated? The second of these questions requires a foray into a second area of rational choice theory, Constitutional Political Economy, which Tullock, together with James Buchanan, pioneered in *The Calculus of Consent* (1962).

Setting the stage: the politics of pressure

During the 1950s and 1960s the empirical and normative study of interest groups was dominated by pluralists like David Truman (1951) and Robert Dahl (1956). Although pluralism is an easier position to caricature than characterize, pluralists believe that power should be dispersed throughout society, that public participation in political processes should be encouraged, and that government policy should command the consent of the public (Baggott, 1995: 13). Pluralists argue that interest-groups are important policy actors *and* that they are instrumental in achieving these goals. Interest groups allow people to express their preferences over policy issues on a sustained basis and to become personally involved in the political process. They also act as

a check upon and a balance to any concentrations of power within society.

In the 1970s the political science tide began to turn rather decisively against pluralism. Neo-pluralists like John Kenneth Galbraith (1972) and Charles Lindblom (1977) argued that pluralist ideals were not being realized in practice because business in general and multinational corporations in particular had privileged access to the policy-making process. Similar arguments were developed during this period by corporatists and Marxists. Corporatists argued that policy-making was increasingly dominated by a small number of business groups and unions who, in exchange for their access and influence, helped implement government policy (Schmitter, 1974). A few political scientists argued that this was a good thing: that corporatism would engender policy stability and lead to better industrial relations. Most political scientists, however, saw in corporatism a threat to democracy, public participation and public accountability. As for Marxists, although a few at this time emphasized the autonomy of the capitalist state, most joined with neo-pluralists and corporatists in documenting and decrying the unfair advantage enjoyed by business and business groups (see Smith, 1993: 37–46 for an overview).

The final critique of pluralism we will consider here was developed by the 'New Right' in Britain and America. Whereas the pluralists argued that interest groups were good for democracy, the New Right argued that they encouraged the pursuit of sectional interests, undermined the legitimacy of the state and, in the case of trade unions, the rule of law (Hayek, 1982). One important strand of this argument drew on Olson's *The Logic of Collective Action*. Pluralists assumed that people would always and everywhere mobilize in support of their interests, and that the pattern of interest group activity on any particular policy issue could therefore be taken as indicative of the state of public opinion. Olson showed why this is false. People with shared interests must overcome a collective action problem if they are to organize in defence of that interest. Because some groups are more likely to overcome that problem than others, it cannot be assumed that larger and more powerful interest groups necessarily represent people who feel more intensely about some issue.

The defence of interest groups offered by pluralists and disparaged by neo-pluralists, corporatists, Marxists and, to an extent, the New Right, is a political one. This argument revolves around the question of whether or not interest groups have fair and equal opportunities to influence policy and, if they do, whether or not this is a good thing. The

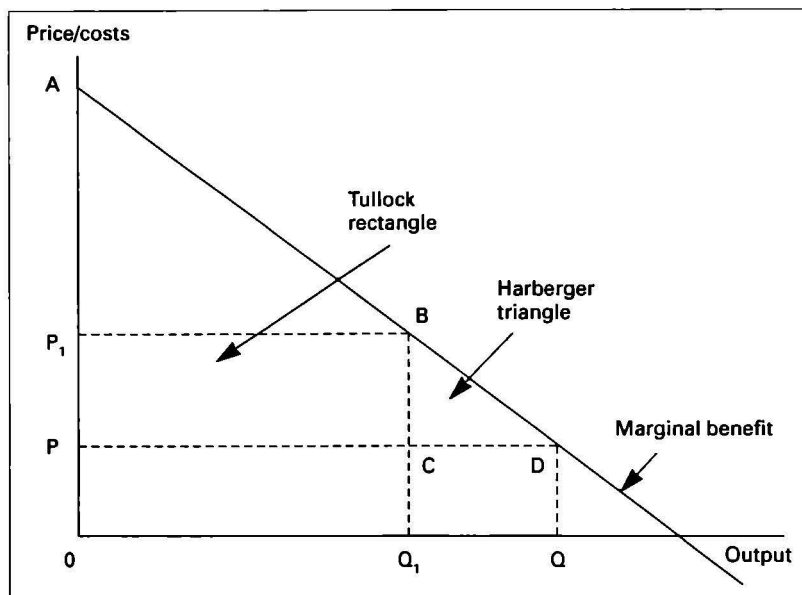
New Right's position is, however, a distinctive one in that it is also concerned with the economic consequences of interest group activity. Samuel Brittan (1975, 1977) argued that the postwar appeasement of pressure-groups had fuelled inflation and compromised the free market. Mancur Olson (1982) argued that interest-groups caused institutional sclerosis and had retarded postwar growth in Britain and Germany. This economic critique finds its most detailed expression in the theory of rent-seeking.

Rent-seeking: the welfare costs of tariffs, monopolies and theft

Neo-classical economists argue that perfectly competitive markets generate perfect, welfare-maximizing, outcomes. Yet markets often fail and when they fail they generate imperfect results. One important source of market failure is monopoly. For competition to be perfect there must be a large number of buyers and sellers who are individually unable to influence the price of their product. But many industries are dominated by, at most, a handful of firms who can increase their profits by raising prices and restricting output at the expense of consumer welfare.

Consider Figure 7.1 in which the quantity of some good being produced is, once again, shown on the horizontal axis and price and cost on the vertical axis. Assume that a perfectly competitive industry produces output Q at a price P equal to marginal cost. Notice that at this price some consumers are paying less for the good than they would be willing to pay. The resulting consumer surplus is shown by the triangle $A-P-D$. Assume now that the industry is, for whatever reason, transformed into a monopoly. In order to maximize its profits, the monopolist will reduce output to Q_1 and raise price to P_1 . Less of the product will now be sold and that which is sold will be sold at a higher price. This has two consequences. The first is a loss of consumer surplus measured by the triangle $B-C-D$. The second is a transfer of income to the monopolist in the form of excess profits measured by the rectangle $P_1-B-C-P$.

Economists traditionally conceived of the costs of monopoly in terms of the triangle, which, in honour of the first economist to measure its size, Arnold Harberger (1954), is often known as the Harberger triangle. But this account of the costs of monopoly was found to suffer from a serious problem. Although economists had

Figure 7.1 *The efficiency costs of monopoly*

generally held that monopoly was a significant economic problem, the costs of monopoly were actually found to amount to no more than a fraction of 1 per cent of gross domestic product (Johnson, 1958; Schwarzman, 1960). Did this mean that monopoly was economically unimportant? Tullock argued that it did not and that those economists who had been attempting to calculate the costs of monopoly had been looking in the wrong place.

At the time he wrote 'the Welfare Costs of Monopolies, Tariffs and Crime', Gordon Tullock (1922–), who completed his doctoral studies at the University of Chicago, was a lecturer at the University Virginia. His article – which was rejected by a number of more prestigious journals before eventually appearing in the *Western Economic Journal* (Tullock, 1993: 11–13) – starts with the observation that governments tend not to create monopolies of their own accord but 'have to be lobbied or pressured into doing so'. This raises the following question. How much will firms invest in order to acquire a monopoly privilege? Tullock suggests that they will be willing to invest as much in the acquisition of a monopoly as they believe that monopoly is worth (Box 7.1). In other words, they will be willing to invest resources to the value of the area P_1 –B–C–P. The critical step in

Box 7.1 Rent dissipation

Tullock (1967) initially suggested that the total amount spent in pursuit of a rent would be equal to the value of that rent: that rents would be entirely 'dissipated' in the process of rent-seeking. Tullock's hypothesis about the dissipation of rents was formally restated by Richard Posner (1975). He constructed an example in which 10 firms must compete to capture a monopoly rent worth a million dollars. He demonstrated that if (i) actors are risk-neutral, (ii) the value of the rent-seeking prize is known and fixed, and (iii) the chances of any one firm acquiring the rent are a positive and monotonic function of the amount invested, then each firm will invest one hundred thousand dollars in rent-seeking.

The assumption that rents would be fully dissipated during the process of rent-seeking was challenged by Tullock (1980) himself who argued that whether or not this is so will depend upon how competitive the rent-seeking industry is. He constructed a very different example using the analogy of a lottery. There is a \$100 prize; there are two firms competing to acquire that prize; firms can buy as many tickets as they want at a cost of \$1 each; once every firm has bought as many tickets as it wants, one ticket is then randomly drawn and the prize given to its owner. How many tickets should each firm buy? Intuitively the answer is 50. But Tullock argues that this is not the case; if there is a common knowledge of rationality, each firm ought to buy 25 tickets. To see why, consider the following explanation. When each firm has bought 25 tickets each firm will have a 50 per cent chance of winning the \$100 prize. At this point, the expected value of each firm's tickets will therefore be \$50. Consider the position of firm A as it contemplates buying an additional 25 tickets. A total of 75 tickets will then have been bought, of which it will own 50, giving it a two-thirds chance of winning the prize. The expected value of firm A's tickets is therefore \$66. But this \$16 increase in the value of their tickets will have cost firm A \$25.

Tullock went on to show that whether rents are not under-dissipated, dissipated or over-dissipated will depend upon the number of people in the rent-seeking game and the relationship between the number of tickets each firm buys and its chances of winning the prize. When there are a small number of players and the chances of any one ticket being drawn only depend upon on the total number of tickets sold, rents will be under-dissipated. When there are a large number of players or the chances of any one ticket being drawn depend partly upon the total number of tickets that firm has already bought, rents may be over-dissipated. Tullock's article sparked a vigorous, increasingly technical and, it must be said, ultimately unproductive debate in *Public Choice* about the extent to which and the circumstances in which rents will be dissipated (Baye, Kovenock and Vries, 1999; Chee and Gale, 1997; Tollison, 1989; Tullock, 1995). This argument was clearly relevant to but strangely failed to connect with Tullock's important and more practical observations about the size of the rent-seeking industry.

Tullock's argument then comes with the claim that resources invested in this way are wasted:

These expenditures, which may simply offset each other to some extent, are purely wasteful from the standpoint of society as a whole; they are spent not in increasing wealth, but in attempting to transfer or resist transfers of wealth. (Tullock, 1967: 227)

The efficiency costs of monopoly are therefore not simply the Harberger triangle (B–C–D), but what is now known as the 'Tullock rectangle' (P₁–B–C–P) (see Figure 7.1).

In the introduction to one of several edited collections of articles about rent-seeking, Tullock and his sometime co-author, Charles Rowley (1998: 3), observe that

within the short space of twenty years, scholarship employing the rent seeking concept has developed into a major research program, achieved an almost dominant role in public choice, and attained a significant foothold in the literature of economics, political science and law and economics.

As self-interested economic actors with books to sell, articles to submit and prizes to collect, Tullock and Rowley no doubt have an interest in exaggerating the impact of their work. This is the logic of the rent-seeking position they espouse (Hindmoor, 1999). Their assessment is not, however, without foundation. As public choice has blossomed, so too has the theory of rent-seeking. In recent years, the rent-seeking perspective has been applied to topics as varied as electoral strategy in Taiwan (Batto, 2005), local government in China (Brandt, Rozelle and Turner, 2004), inheritance rules (Baker and Miceli, 2005), privatization in Bolivia (Kohl, 2004), management structure within multinational corporations (Mudambi and Navarra, 2004), the Soviet arms industry (Harrison, 2003), the Palestinian industrial estates scheme (Lagerquist, 2003), fisheries policy in Tasmania (Phillips, Kriwoken and Hay, 2002), energy wealth and tax reform in Kazakhstan (Weinthal and Luong, 2001), air cargo services in the Philippines (Bowen, Lienbach and Mabazza, 2002), economic development in Vietnam (Fforde, 2002), Chile (Hojman, 2002), Malaysia (Rasiah and Shari, 2001), China (Guo and Hu, 2004) and Africa (Mbaku, 1999), the regulation of local cable TV (Otskua and Braun, 2002), the Protestant Reformation (Ekelund, Hebert and Tollison, 2002), state violence

(Nafziger and Auvinen, 2002) and ethnic conflict (Osborne, 2000), squatting in South Africa (Nathan and Spindler, 2001), economic sanctions (Dorussen and Mo, 2001), labour migration in Israel and Japan (Bartram, 2004), food regulation (Law, 2003), land policy in Ghana (Antwi and Adams, 2003) and bank mergers (Gramm, 2003).

The question I now want to ask is why. Why has rent-seeking attracted such interest? This may not seem like a particularly fair question to ask. It is not, after all, one that has been asked of the other 'classic' texts considered so far. But whilst rent-seeking represents an obviously important addition to the theory of monopoly, it is not at all obvious why it should have gone on to 'dominate' rational choice. There are, I think, a number of possible explanations:

- 1 In his original article, Tullock talked about the 'dynamic costs' of monopoly. The evocative term rent-seeking was actually coined by Anne Krueger (1974) seven years later. Would Tullock's theory have flourished without this name? It is obviously impossible to know but it is worth noting that Tullock's article only began to attract widespread academic attention once the rent-seeking label had been applied. In a crowded political marketplace with rationally ignorant voters, candidates must invest large amounts of money in order to get their name recognized (see Mueller, 2003: 481–3). Political dynasties – be they Kennedy, Bush or Clinton – are cost-effective because they can achieve this basic recognition at little or no cost. In a crowded academic marketplace in which there are more ideas than there are readers, the success of rent-seeking may show that a memorable name is equally valuable.
- 2 Tullock's original argument has, in two ways, proved itself capable of adaptation and extension. Firstly this is so in terms of the range of government actions to which the description of rent-seeking has been applied. Tullock's original article was, as its title suggests, about monopolies, tariffs and theft. Yet his argument can be extended to cover the analysis of any and all special economic privileges including government contracts, subsidies, loans, export credits, favourable regulation, taxation, investment support and licensing requirements. In most capitalist economies state expenditure now accounts for over 40 per cent of gross domestic product. Rational choice theorists argue that all of this expenditure is subject to rent-seeking activity by special interests. In Africa, the results of often quite blatant rent-seeking are horribly obvious. A report for the African Union in 2002 estimated

that corruption costs Africa around \$148 billion annually (Meredith, 2005: 686; on African political economy and rent-seeking also see Humphreys and Bates, 2005, and Bates, 1981). Secondly it is so in terms of the types of expenditure involved in the pursuit of special privileges. Tullock's original article focused upon the expenditure of resources in pursuit of rents. But firms and interest-groups also invest resources in attempts to *prevent* rivals from gaining some competitive advantage and to ensure the *survival* of rents they have already acquired. By threatening to introduce new regulations in some industry, government can also engage in *rent-extraction*:

Milker bills is one term used by politicians to describe legislative proposals intended only to squeeze private producers for payments not to pass the rent-extracting legislation. 'Early on in my association with the California legislature, I came across the concept of milker-bills – proposed legislation which had nothing to do with milk to drink and much to do with money, the mother's milk of politics . . . Representative Sam, in need of campaign contributions has a bill introduced which excites some constituency to urge Sam to work hard for its defeat (easily achieved), pouring funds into his campaign coffers and forever endearing Sam to his constituency for his effectiveness. Milked victims describe the process simply as blackmail and extortion. The threats are quite openly made. (McChesney, 1987: 108)

- 3 Rent-seeking also flourished because it offered to rational choice theory a distinctive and distinctively hostile theory of the state. Welfare economists argued that market failures justified government intervention. The theory of rent-seeking stood this view on its head; monopolies and other forms of competitive advantage do not simply happen, they are nearly always created by politicians seeking campaign funds, the promise of future employment, and other forms of political capital. During his inaugural address as the 40th President of the United States of America in January 1980, Ronald Reagan famously suggested that 'in the present crisis, government is not the solution to our problem; government is the problem'. This is as neat a summary of the political economy of rent-seeking as any.

The costs of rent-seeking

Exponents claim that rent-seeking is both pervasive and economically crippling. Estimates of the costs of rent-seeking run to 50 per cent of American gross domestic product (Laband and Sophocleus 1988), 20 to 40 per cent of Indian gross domestic product (Mohammad and Whalley, 1984) and 12 per cent of American domestic consumption expenditure (Lopez and Pagoulatos, 1994). Now figures like this should be treated with extreme caution. The problem here is not so much that much rent-seeking expenditure is hidden. It is instead that it is often almost impossible to know whether some particular item of expenditure was motivated by the desire to acquire a rent. Take the case of campaign expenditure. In the 2004 US Presidential campaign George W. Bush spent \$345 million with the largest single donations coming from Morgan Stanley (\$600,000), Merrill Lynch (\$512,000) and Goldman Sachs (\$388,000). John Kerry spent \$325 million with his largest donations coming from the very different sources of the University of California (\$625,000) and Harvard University (\$360,000) (<http://www.opensecrets.org>). Should all this expenditure be counted as rent-seeking? No doubt much of this money was given in the hope of acquiring subsequent policy favours, but some of it was presumably given as an expression of political support rather than as an attempt at rent-seeking. The problem is that because actors have self-interested reasons to deny that they donated money for self-interested reasons, it is extremely difficult to know how much of this expenditure should be counted as rent-seeking.

There is a second problem with existing accounts of the costs of rent-seeking. In his original article, Tullock implied that firms would invest as much in the pursuit of a monopoly privilege as they believed that privilege was worth in terms of additional profits. Given the number of special privileges government dispenses, we would therefore expect the amount spent by firms and interest-groups on lobbying, public relations and campaign contributions to be equally large. Yet this is very obviously not the case:

During the time I was living in Washington D.C., I was impressed with the size and general prosperity of the rent-seeking industry in that city. As I grew to know more about it, however, I began to wonder why it was not much bigger. Not far from my apartment, for example, was the headquarters building of the dairy lobby. It was a moderate-sized office building, nowhere near as big as one would

think justified by the roughly \$500m a year the dairy farmers were taking out of the taxpayers' pockets . . . given these figures, the rent-seeking industry is surprisingly small. (Tullock, 1989: 3)

Now as Tullock goes on to suggest, some of the resources invested by firms and interest-groups will be spent on expensive meals, foreign travel and other more shady services that are not a part of the visible rent-seeking industry. Yet, if rent-seeking consumes 50 per cent of American gross domestic product, it nevertheless seems odd that there are only around 60 political consultancies, 29 public relations and 21 lobbying firms registered in Washington DC (see <http://dir.yahoo.com>). Does this mean that rent-seeking is less of an economic problem than initially envisaged? Tullock argues not. The costs of rent-seeking are, he now suggests, manifested in the passage of inefficient legislation which receives political support as a result of (i) spurious appeals to the public interest, and (ii) logrolling.

Rent-seeking and the public interest

Politicians create and dispense rents in the expectation of acquiring campaign contributions, political endorsements and perhaps future employment. Political scientists have confirmed that, in America at least, increased campaign expenditure does usually increase the vote of a challenging candidate (Nagler and Leighly, 1992; Levitt, 1994; Mueller, 2003: 481–6 for a review). So politicians can benefit by selling policy promises. But politicians presumably have to set these benefits against the costs of being found selling policy favours. Now cynics may object that the risks of exposure and punishment for creating and selling rents are actually quite small, but politicians and the media presumably have some incentive to highlight the misdemeanours of their opponents (Wittman, 1995). Tullock argues that one way in which politicians can minimize their political exposure is by constructing a public interest 'cover' for their actions that appeals to 'expressive' voters (Box 7.2). By making it appear that there are actually good reasons for granting some privilege, politicians can immunize themselves from criticism. Politicians' commitment to any such cover will be purely instrumental, they will not *really* believe what they are saying. But the construction of such a cover is nevertheless politically useful. This argument is relevant to the discussion about the costs of rent-seeking because Tullock suggests that the construction of a public interest cover usually precludes direct cash payments to firms and interest-groups and often requires the adoption of inefficient production methods.

Box 7.2 Expressive politics

Rational choice can be defined as involving the application of the methods of economics to the study of politics. Rational choice theorists have traditionally argued that there is no real difference between market and political exchange and that it is inappropriate to assume of individuals who are entirely self-interested in the economic arena that they somehow become entirely public-spirited and self-sacrificing in the political arena (Brennan and Buchanan, 1985). Most other political scientists would instinctively reject this argument. In recent years they have, however, been joined in doing so by a prominent rational choice theorist, Geoffrey Brennan.

Brennan argues that within a market setting, actors are usually decisive over outcomes. When asked to choose between apples and pears, actors make their choice in the expectation that they will get whatever they choose. In political situations actors are, however, often non-decisive. A person who confronts a choice between voting for party A and party B makes this choice knowing that their individual choice is unlikely to make any difference to the final outcome. A person who confronts a choice between joining or not joining a group like Amnesty International does so knowing that the efficacy of that group will be almost entirely unaffected by their choice. This does not mean that actors in such political settings will simply act irrationally; it will instead, Brennan (and Lomasky, 1993: 33) argues, lead them to act 'expressively' rather than 'instrumentally': that is to act out of a 'desire to express feelings and desires simply for the sake of the expression itself and without any necessary implication that the desired outcome will be brought about thereby'.

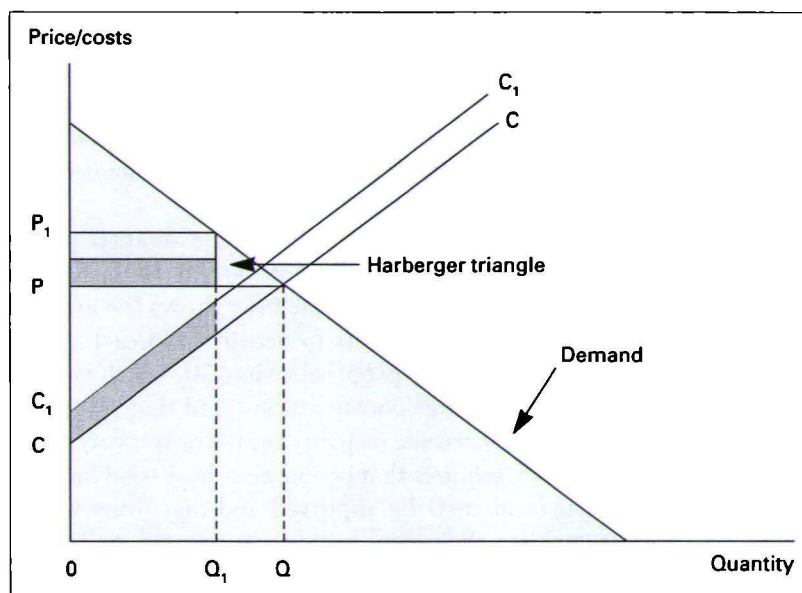
This basic argument about the differing natures of economic and political rationality is used to explain why: (i) it may be rational to vote (Brennan and Lomasky, 1993). People do not vote because they think they can affect the result, they vote in order to express their support for a particular party in much the same way and for the same reason that supporters cheer on their team at a football match; (ii) it may be rational to contribute to the provision of a collective good in so far as that contribution is *itself* a source of benefit (pp. 117–18); (iii) people will vote for politicians who appeal not to their sense of self-interest but their beliefs about what constitutes the public interest; (iv) political parties sometimes adopt divergent policy platforms in order to appeal to voters who select parties on the basis of their support for often symbolic policy positions (Brennan and Hamlin, 1998); (v) people can sometimes shake-off the grip of self-interest and vote for constitutional rules which protect the public interest (Brennan and Hamlin, 2002) (see pp. 175–6).

Consider as an example of the kind of political process Tullock has in mind the European Union's Common Agricultural Policy. Although recently the subject of another round of reform, this policy has, until recently, cost European taxpayers around 30 billion pounds a year whilst adding about nine pounds a week to the average family's weekly food bills. The excesses of this policy were such that at one point the average income of a European Union dairy cow exceeded that of half the world's human population. Now imagine that politicians had simply proposed giving farmers 30 billion pounds a year in direct cash payments. There would have been political uproar. So instead payments are hidden through subsidies, quotas, price supports and set-aside measures justified as being necessary to stabilize income, protect the interests of hill-farmers and preserve the environment. The problem with these measures is not, however, simply their cost but their inefficiency. Subsidies paid through the Common Agricultural Policy create perverse incentives to over-produce and this leads to the accumulation of rotting surpluses which are often 'dumped' on third-world markets. The Common Agricultural Policy may cost 30 billion pounds a year but it is not worth this amount in additional profits to farmers. Hence farmers have no reason to invest 30 billion pounds a year in the pursuit and defence of this policy. This does *not* mean that rent-seeking is economically insignificant; it means that the costs of rent-seeking reveal themselves in the commitment to this hugely inefficient policy.

A formal version of this argument is provided in Figure 7.2 (Tullock, 1990), which shows the usual demand and supply curves for an industry with the supply curve (CC) in this case showing variable cost. At the initial equilibrium output, Q will be produced at price P . Suppose that the industry seeks and obtains a government-mandated price rise to P_1 . As a result, the quantity produced falls to Q_1 . The Harberger triangle measures the direct costs of granting this special privilege in terms of lost consumer surplus. Once again, the Tullock rectangle to its left (which, for reasons that will become apparent, is divided into two parts) measures the additional profits the industry stands to make and so, in theory, the amount it will be willing to invest in pursuit of the rent.

Assume now that the public interest cover used to justify this price rise requires the adoption of a less-efficient method of production. Because prices are now fixed, this increase in costs cannot be passed on to the consumer and will have to be met by the industry; reducing overall profitability and the value of the rent. More precisely, assume that costs increase from CC to C_1C_1 . At the new equilibrium, total additional costs will be equal to the shaded area between the two cost lines.

Figure 7.2 The costs of rent-seeking



Source: Adapted from Tullock (1990), p. 197.

Looking now at the Tullock rectangle, this increase is equivalent to a reduction in profits of the amount shown in the lower and shaded part of the rectangle (the size of this part of the rectangle is equal to the size of the shaded area between CC and C_1C_1). The total costs of rent-seeking are therefore: (i) the Harberger triangle; (ii) the amount invested in pursuit of the rent (that is the upper part of the rectangle); and (iii) the additional costs which come from using the less-efficient method of production. The most the industry will be willing to invest in the pursuit of the rent is however the smaller, upper, and not shaded, part of the rectangle.

Rent-seeking and logrolling

In *The Calculus of Consent*, Tullock and James Buchanan (1962) analysed the way rational actors might choose between alternative constitutional rules. I will say more about the subject of Constitutional Political Economy presently. For the moment I want to focus upon the normative defence of 'logrolling' or, as it is sometimes known, 'vote-trading',

Buchanan and Tullock developed as a part of their work. Logrolling, which is a salient feature of American legislative politics, occurs when one politician agrees to vote for another politician's proposed legislation or legislative amendment in return for that politician supporting some measure they would otherwise oppose. The strong claim Buchanan and Tullock make for logrolling is that it allows representatives to express the intensity of their preferences and so enhances the efficiency of democratic decision-making.

Consider the situation in Figure 7.3, in which there are three politicians (Ali, Betty and Charlie) who must vote for or against three proposals (1–3). The numbers in each of the cells shows the amount each politician expects their constituents to benefit from each of the proposals (in \$). Assume that each proposal costs \$30, which is to be divided equally between the three constituencies, and that proposals will only be approved if they receive majority support. At a bare minimum, economic efficiency requires that proposals whose total benefits are greater than their total costs be approved and that those whose total costs are greater than their total benefits be rejected. Self-interested politicians intent upon their re-election will, however, only vote for proposals whose benefits for *their* constituents are greater than their \$10 share of the costs. For this reason, Betty and Charlie will vote against the first proposal, all three will vote against the second proposal, and Ali and Betty will vote against the third proposal. So although the total benefits of the first and third proposals are greater than the total costs, all three will be defeated.

Figure 7.3 *Logrolling and efficiency*

		Proposal		
		1	2	3
Politician	Ali	20	5	4
	Betty	6	8	5
	Charlie	8	4	22
Total		34	17	31

If, however, logrolling is permitted then Ali will find it in her interest to support the third proposal so long as Charlie agrees to support the first proposal. Ali's constituents will lose \$6 as a result of supporting the third proposal ($4 - 10$) but will gain \$10 from the passage of the first proposal ($20 - 10$). Charlie's constituents will lose \$2 from supporting the first proposal ($8 - 10$) but will gain \$12 from the passage of the third proposal ($22 - 10$). This logrolling deal is not Pareto-efficient. Although Ali and Charlie's constituents are now better-off, Betty's are worse-off. But if we judge efficiency in terms of the passage of legislation for which total benefits are greater than total costs, logrolling is beneficial.

This account of the potential benefits of logrolling assumes that voters are well-informed and calculate the total costs and benefits of the logrolling deals done by their representatives. Yet, as Tullock (1993: 34–40; 1998) has come to emphasize, most voters are rationally ignorant (Box 7.3). Representatives will therefore be able to gain votes and enhance their chances of re-election by securing the passage of legislation that, whilst benefiting the local constituency, requires them to vote for other pieces of legislation whose total costs are actually much higher. Far from enhancing efficiency, logrolling actually facilitates inefficient 'pork-barrel' politics (Shepsle and Weingest, 1981; Stein and Bickers, 1995).

Consider Figure 7.4 in which it is, once again, assumed that three politicians are to vote on three proposals each one of which will cost each constituency \$10. Notice that the total costs of *each* project are greater than the total benefits. With simple majority voting, Becky and Charlie will vote against the first proposal, all three will vote against the second proposal, and Ali and Becky will vote against the third proposal. Once again, a logrolling deal is possible whereby Ali agrees to vote for the third proposal in return for Charlie's support on the first proposal. But *if* voters are well informed, this deal will not make sense and will not take place. Ali's constituents will lose \$7 as a result of supporting the third proposal ($3 - 10$) and will only gain \$5 from the passage of the first proposal ($15 - 10$). Charlie's constituents will lose \$7 from supporting the first proposal ($3 - 10$) and will only gain \$2 from the passage of the third proposal ($12 - 10$). But if voters are rationally ignorant and judge their representative exclusively in terms of the 'bacon' they bring back home, Ali and Charlie may find it in their interests to do a logrolling deal even though their constituents will be worse-off as a result.

Why is the rent-seeking industry so small? On this reading, it is

Box 7.3 Rational ignorance

In any democratic system the chances of any one person's vote making any difference to the final outcome is miniscule. One consequence that has been drawn from this is that it is not rational to vote. Another is that it is not usually rational for people to become politically informed. Most people will acquire some politically relevant information at almost no cost in the course of watching news broadcasts and having occasional conversations with friends. As Anthony Downs (1957: 241–8) first emphasized, it will not, however, usually make sense for people to invest time and money in a deliberate effort to acquire information about public policy. Rational individuals will realize that their vote is almost certainly not going to make any difference to the final result and that any such investment would therefore be wasted. As Downs' argument is restated by Samuel Popkin (1995: 17):

the health of the national economy may in fact have a greater effect on voters than whether their next vacation is fabulous or merely good, but time spent deciding where to travel leads to better vacations, whereas time spent evaluating . . . policies tends not to lead to better policies but only a better-informed vote.

Critics of democracy like the Roman statesman Cicero have argued that 'in the common people there is no wisdom, no penetration, no power of judgement'. On the one hand, rational choice theorists would seem to concur with this judgement. People may be rationally ignorant but they are ignorant nonetheless. On the other hand, rational choice theorists have emphasized that rationally ignorant voters may nevertheless be capable of making reasoned political choices (Lupia and McGubbins, 1998). Downs (1957: 95–8) argues that parties compensate for voters' rational ignorance by developing ideologies – 'verbal images of the good society and of the chief means of reaching such a society' – which voters can, at almost no cost, learn about and use to choose between the parties without having to 'become informed about a wide range of issues'. Those emphasizing the importance of 'party identification' argue, in a similar way, that voters can use party labels as a low-cost way of finding out about the kind of policies a candidate is likely to support (Campbell, Converse, Miller and Stokes, 1960).

Voters can use a number of other 'cues' to determine which party or candidate they ought to support in the absence of any detailed policy information. These include the opinions of politicians (Morton, 1993), journalists (Iyengar and Kinder, 1987), friends (Brady and Sniderman, 1985) or interest-groups (Lupia, 1994) whose opinions they either trust or mistrust. In order to reach a reasoned choice between parties A and B, voters do not have to know a great deal about the policies being offered by A and B. It may be enough for a voter to know that a friend of theirs whose values and judgements they trust supports one party instead of the other.

Figure 7.4 *Logrolling and pork-barrel politics*

		Proposal		
		1	2	3
Politician	Ali	15	7	3
	Betty	6	4	6
	Charlie	3	9	12
Total		24	20	21

relatively small because firms and interest-groups are pushing at an open door when they lobby their local representative for some measure benefiting their constituency. Politicians do not simply benefit from rent-seeking by extracting campaign funds and other political favours in return for creating rents; they also benefit by creating the rents themselves. This does, however, represent an important shift in Tullock's argument. Tullock's initial point in 1967 was that economists had underestimated the costs of monopoly because they had focused on the Harberger triangle at the expense of the Tullock rectangle. Although Tullock still maintains that monopoly is a significant economic problem, he now seems to accept that the costs of the rectangle are not that great. His point is instead that economists underestimate the costs of the Harberger triangle because they ignore the way in which legislatures can exploit their monopoly control over policy-making to pass legislation that actually harms voters.

Reforming the rent-seeking society

No matter how economically destructive it has become, rent-seeking will not simply draw to a halt of its own accord. Individuals in a rent-seeking society find themselves caught in a prisoners' dilemma in which everyone would benefit if everyone were to stop rent-seeking but in which it is in nobody's individual interest to do so (Rowley, 1988). This does not, however, mean that rent-seeking is an unavoidable fact of

political life. As Buchanan and Tullock emphasized in *The Calculus of Consent*, there is an important analytical distinction to be made between choice *within* rules and the constitutional choice *between* rules (also see Brennan and Buchanan, 1985). Individuals caught in a state of nature in which life is 'solitary, poor, nasty, brutish and short' may agree to create a leviathan to enforce peace. In the same way, and at the same constitutional level, individuals might agree to changes in rules which limit or eliminate rent-seeking. Four such possible measures have been identified by Tullock (1993: 78–85):

- 1 *Supra-majority voting*. In order to secure the passage of legislation which benefits their particular constituents but reduces overall efficiency, politicians will have to construct logrolling deals. Increasing the size of the majority needed to secure the passage of legislation will increase the number of such deals that need to be completed. Because it takes time, effort and trust to construct logrolling deals, supra-majority voting will, Tullock suggests, thereby reducing the volume of rents created.
- 2 *Greater use of referenda*. Tullock argues that referenda give voters the opportunity to reject proposals benefiting a minority of voters at the expense of others. Referenda work in this way because they allow voters to consider one issue at a time, so precluding logrolling deals.
- 3 *Balanced budget requirement*. The rents created by government result in higher public expenditure, the costs of which are met by future generations of taxpayers who cannot vote in current elections (Buchanan and Wagner, 1977). By limiting government's capacity to create rents, a balanced budget amendment ought therefore to reduce the total amount of rent-seeking.
- 4 *Direct limits on the size of the government*. State expenditure has increased in almost every country in the postwar years. A formal ceiling on the size of government would, Tullock argues, limit rent-creation and rent-seeking for the same reasons as a balanced budget amendment.

A number of other possible constitutional rules to limit rent-seeking can also be identified:

- 5 *Generality of legislation*. Rent-seeking benefits sectional interests at the expense of the public interest. As Buchanan and Tullock (1962: 77) first observed, rent-seeking can be stymied by a rule requiring that

the costs and benefits of legislation be borne equally by *all* the individuals in a society rather than a small sub-set of them. As Buchanan and Roger Congleton (1998: xi) have subsequently affirmed that

the proper principle for politics is that of generalisation or generality. This standard is met when political actions apply to all persons independently of membership in a dominant coalition or an effective interest-group. The generality principle is vindicated to the extent that political action is overtly discriminatory in the sense that the effects, positive or negative, depend on personalised identification.

This is an important but hardly original argument. During the debate about the ratification of the American Constitution, Alexander Hamilton identified the fundamental principle of republican government as being 'a universal right to due process of law under laws which were themselves expressed in completely general terms' (quoted in Hampsher-Monk, 1992: 248).

- 6 *Campaign finance*. Politicians create rents partly in the hope of attracting campaign funds. The incentive politicians have to create rents might therefore be lowered by introducing either state funding of political parties or limits on the overall amount candidates and parties can spend during an election campaign.
- 7 *Party structure*. It is a distinctive feature of the American political system that parties and party discipline are relatively weak (Wattenberg, 1998). Logrolling deals are easy to construct because Congressmen are not whipped into following party lines. Tullock (2005: 98) nevertheless suggests that the only difference between Britain and America is that British rent-seeking takes place behind closed doors:

I knew a British politician . . . who claimed that nothing like that [logrolling] occurred in the English Government. The following day he gave a speech on what goes on in the House of Commons. He said 'you go to a committee in which you are totally uninterested and vote with a friend. You then take him to your committee and hold up his hand'. I naturally challenged this and he replied 'so that is what you mean'.

But Tullock seems here to misunderstand what the British politician was talking about. Party discipline in Britain is such that members

will nearly always vote for their party. So ingrained is this habit that when called upon to attend and vote at a legislative committee, politicians will simply look to see how their 'friend' (that is party colleague) is voting. The politicians Tullock is talking about here are not constructing a logrolling deal whereby one politician will vote with another politician in *return* for that person's support on some other issue, they are simply employing a low-cost way of finding out how they ought to vote given that they are going to vote the party line.

In systems with strong party discipline, rent-creation and rent-seeking will take place within the 'core executive' (Rhodes, 1995). But there are reasons to believe that the total amount of rent-seeking in systems in which political power is concentrated within the core executive may be lower. This is firstly because the relatively small number of actors within the core executive will often face intensive media scrutiny of their actions. At times, this scrutiny may deter them from engaging in rent-seeking. It is also because these national politicians should, in theory at least, find it in their interests to consider the *total* costs and benefits of particular measures rather than the benefits to their constituents (although see Dowding, John and Ward, 2004 on the targeting of government expenditure in marginal constituencies).

Devising and enforcing constitutions

Constitutional rules can be used to limit rent-seeking. Two very general questions remain, however. The first relates to the formulation of constitutional rules. Why would self-interested actors support constitutional rules limiting rent-seeking? Why would they not instead seek support for constitutional rules benefiting themselves and others in their coalition at the expense of the public interest? We cannot simply assume that constitutional rules will take a general rather than discriminatory form. For such an agreement is meant to be the output rather than the input to constitutional debate. The second question, which was largely ignored by Buchanan and Tullock in *The Calculus of Consent*, relates to the implementation and enforcement of constitutional rules. Who guards the guardians? Individuals may create a leviathan to enforce peace but what would there then be to stop that leviathan from making their life as nasty and short as it had been in the state of nature (Brennan and Hamlin, 2001: 134–5)? Individuals may

agree upon constitutional rules limiting rent-seeking but who would oversee their enforcement? We cannot simply rely upon the 'government' to do so because politicians, regulators and bureaucrats may find it in their interest to break these rules and sell rents to the highest bidder (Merville and Osborne, 1990).

The answer usually given by constitutional political economists to the first of these questions is that constitution-making happens behind a veil of uncertainty and that this limits rent-seeking and promotes the public interest (Buchanan and Tullock, 1962: 75–9; Buchanan, 1977; Brennan and Buchanan, 1985). By their very nature constitutional rules are meant to be both enduring and generally applicable in the sense of applying to varying situations. These features, it is argued, will make it very difficult for individuals to identify rules benefiting them whilst harming others and require them to support, *for self-interested reasons*, those rules they believe are most likely to benefit the most number of people:

The individual is [at the constitutional stage] uncertain as to what his own precise role will be in any one of the whole chain of later collective choices that will actually have to be made. For this reason he is considered not to have a particular and distinguishable interest separate and apart from his fellows. This is not to suggest that he will act contrary to his interest; but the individual will not find it advantageous to vote for rules that may promote sectional, class, or group interests. (Buchanan and Tullock, 1962: 78)

The veil of uncertainty has one further and attractive feature: it promotes unanimity. If individuals were in a position to identify rules promoting their own interests at the expense of the others, each person would be likely to favour a different set of constitutional rules. Because self-interested individuals will have no alternative but to support those rules they believe are in the public interest, agreement should be possible (but see Sutter, 1998). This is important because constitutional political economists regard unanimity (or at least near unanimity) as providing constitutional rules with their source of legitimacy (Buchanan and Tullock, 1962: 14; Buchanan, 1991).

Buchanan's veil of uncertainty bears an obvious resemblance to John Rawls' (1921–2002) veil of ignorance. In *A Theory of Justice*, Rawls (1971) suggests that our precepts about justice can be represented and so better understood in a situation he calls the 'original position'. The original position is a hypothetical condition in which

rational individuals choose principles of justice from behind a 'veil of ignorance' which prevents them from knowing anything about their age, sex, religious beliefs or economic capabilities. The veil of ignorance ensures that principles of justice are chosen impartially (Barry, 1995). Rational choice theorists tend to scoff at Rawls' construct because it relies upon what they regard as wishful thinking. Individuals are self-interested and whilst self-interested individuals might imagine themselves behind a veil of ignorance, it is, they argue, unclear why this would make any difference to the constitutional rules they eventually choose. Why would a well-off person agree to constitutional rules mandating income redistribution simply because they could *imagine* what it would be like to be poor? As a way of extracting the public interest from the base metal of self-interest, the veil of uncertainty is, it is argued, superior to the veil of ignorance because it is grounded in an empirical reality.

Yet rational choice theorists are vulnerable to exactly the same criticism. For constitutions are not, in practice, forged behind a veil of uncertainty, they are usually written by people in positions of political authority who have a very clear idea about what measures will and will not serve their future interests and the interests of the groups they represent (Elster, 1991; Ordeshook, 1997). The American Constitution was not written behind a veil of uncertainty, it was written by rich white men who had self-interested reasons to protect property rights and no incentive to consider the position of black slaves. The Russian Constitution ratified in 1993 which minimized the political autonomy of the Russian regions was not written from a position of ignorance, it was drafted by President Yeltsin's advisors who wanted to secure the political authority of their boss in Moscow. So there is a problem for rational choice theory here. It struggles to provide a compelling explanation of why self-interested actors will lend their support to constitutional rules designed to protect the public interest.

Let us now turn to the second question. In what circumstances will constitutions be enforced? The most interesting theoretical work on this question was undertaken several hundred years ago by James Madison, Alexander Hamilton and John Jay in a series of newspaper articles written during the debate on the ratification of the American constitution. The authors of the *Federalist* recognized that democratic elections would, in themselves, be insufficient to ensure the preservation of the constitution. Politicians may, they recognized, sometimes be deterred from breaking the terms of the constitution by the thought of having to subsequently seek re-election. But politicians may often find

that a majority of voters *want* them to override some provision in the constitution and that they will be rewarded at the polls for doing so. The authors of the *Federalist* argued that the American Constitution would however be preserved because it sought to 'counteract ambition with ambition' (*Federalist*, 51) whilst ensuring the selection of candidates whose 'wisdom may best discern the true interests of their country' (*Federalist*, 10). We will look briefly at these arguments in turn.

Liberals argued that liberty had been preserved in Britain through the evolution of a mixed or balanced constitution in which the King, aristocracy and middle-class were represented through the monarchy, House of Lords and House of Commons. The problem confronting Americans was that this form of mixed constitution was not practicable in a state founded upon principles of political equality and republicanism. (Hampsher-Monk, 1992: 207). In order to achieve the same goal of a balanced constitution, Americans sought an *institutional* rather than *social* separation of powers combined with a system of checks and balances. The separation of powers between federal and state government, judiciary, executive and legislature and, within the legislature, between the House of Representatives and Senate, was designed to preclude concentrations of political power. The checks and balances which, for example, gave the judiciary the power to strike down unconstitutional legislation, the legislature the responsibility of ratifying treaties signed by the President, and the President the qualified right to veto legislation passed by Congress, was designed to give each part of the government the means and motive to resist the attempts of any other part to acquire for itself additional and unconstitutional powers.

Madison's defence of the American Constitution in which self-interested political actors have the incentive and opportunity to monitor each other's constitutional performance is one that has appealed greatly to rational choice theorists (Grofman and Wittman, 1989; Kernell, 2003). Yet care needs to be taken in claiming Madison as some kind of a proto rational choice theorist. For although Madison, like Adam Smith, sought ways to reconcile the pursuit of self-interest with the attainment of the public good (Prindle, 2004), he nevertheless emphasized that 'the supposition of universal venality in human nature is no less an error in political reasoning than that of universal rectitude' (*Federalist*, 76). As Geoffrey Brennan and Alan Hamlin (1999, 2000) have recently emphasized, Madison, for this reason, sought to ensure the selection of politicians whose 'wisdom may best discern the true interests of the country, and whose patriotism and love of justice will

be least likely to sacrifice it to temporary or partial interests' (*Federalist*, 51). Classical republicanism, as it was developed in Greece and Rome, emphasized the need to instil in citizens those personal qualities necessary to sustain the republic and ensure its stability. At this time, it was conventional to argue that these virtues, including political honesty, could only be cultivated in small, predominantly agrarian, countries: a position taken during the ratification debate by anti-federalists opposed to the creation of what they regarded as a powerful and potentially tyrannical national government (Manin, 1997: 102–31). Madison argued that constitutional stability depended not simply upon the virtues of citizens *per se*, but upon the virtuousness of those serving in government. Virtuous leaders were, he argued, more likely to be selected in large national constituencies where parochial voices would be drowned-out and where voters could choose between candidates who had already established their virtue in state government.

Assessment

Critics of the rational choice method often suggest that it is in some sense 'inherently' right-wing (King, 1987: 92; also see Self, 1993; Stretton and Orchard, 1994; Dunleavy and O'Leary, 1987). Whether or not this is regarded as being a good or a bad thing depends, I suppose, largely on whether you are on the left or the right, although there is something slightly incongruous about the way many rational choice theorists claim the mantle of scientific neutrality whilst issuing partisan policy proposals. The two most politically charged areas of rational choice theory are rent-seeking and budget-maximizing. The former advocates cut-backs in public expenditure and privatisation; the latter recommends balanced budgets and limits on public expenditure. Neither is likely to appeal to members of the Socialist Workers Party. In both cases it is, however, worth noting that the source of their political bias can be found not so much with the core assumptions of self-interested behaviour or political individualism, but the entirely *contingent* assumption that markets are perfectly efficient. Rational choice theorists may well have been right to accuse welfare economists of comparing the fiction of a perfectly efficient and benevolent government with the reality of market failure, yet Niskanen and Tullock are equally guilty of comparing the fiction of a perfect market with the reality of government failure. That Niskanen does just this is quite

obvious; his claim that public sector bureaucracies 'will supply an output up to twice that' of a private-sector industry explicitly assumes that the private market is perfectly competitive. That Tullock does the same thing is, however, less immediately obvious.

Although rent and profit are simply different words for the same economic concept (Buchanan, 1980), Tullock and his compatriots want to draw a categorical distinction between rent-seeking which has a 'negative social impact' (Tullock, 1989: 55) and harms almost everybody, and profit-seeking which 'benefits almost everyone' (Tullock, 1993: 22). But how, in practice, can profit-seeking be distinguished from rent-seeking? Consider the two following examples. First, that of a firm investing resources in the attempt to discover a cure for cancer (Tullock, 1993: 22–3). If the investment is successful the firm will acquire monopoly patent and large profits. Is this investment therefore rent-seeking? No, because the discovery of a cure for cancer will obviously benefit almost everyone. Second, that of a struggling American steel firm which invests resources in the attempt to secure a ban on the imports of a rival Korean firm on the 'grounds [that they] are environmentally dangerous' (Tullock, 1989: 55). Is this rent-seeking? Yes, because whilst the ban will help the American steel firm it will harm a far larger number of American consumers. What about the environmental damage caused by the Korean imports? Well there is no problem here because Tullock helpfully adds that the argument about 'purported' environmental damage is, 'entirely spurious'.

In these two cases the distinction between rent-seeking and profit-seeking is entirely straightforward, but most of the policy questions politicians are called upon to resolve do not come so neatly packaged (Hindmoor, 1999). Consider the following policy choices. Should farming be subsidized? Should imports from countries using child labour be banned? Should university students from less privileged backgrounds be exempted from paying tuition fees? Should children's books be exempted from sales tax? Should privately-owned bus companies be subsidized in order to discourage car travel and so reduce congestion and pollution? If the answer to any one of these questions is yes, the competitive market will be compromised and a rent benefiting a particular group – farmers, domestic manufacturers, students, publishers and bus companies – created. Should we therefore define any expenditure of resources by any of these groups in pursuit of any of these privileges as rent-seeking? Given Tullock's definition, the answer to this question will depend upon whether the creation of that rent will benefit or harm 'almost everyone'.

Although he is prepared to defend the government-created patent system as socially beneficial and to concede that 'for military reasons' it may be desirable to subsidise national defence firms (Tullock, 1989: 81), Tullock is, in general, a zealous proponent of the free market who believes that government intervention nearly always harms more people than it benefits. He is therefore inclined to view any investment by any group in the pursuit of any rent as rent-seeking. But the position he adopts is an obviously controversial one. Many people believe, sincerely believe, that, to take just one of these examples, the future of the countryside ought not to be determined through the interplay of market forces. No doubt many of the people who believe this are farmers but it is simply not the case that the only people who support farm subsidies are farmers. The point here is this. Those who believe that farming ought to be subsidized will regard subsidies as benefiting 'almost everyone' in so far as they free us from reliance upon vulnerable foreign imports, help preserve a valuable rural way of life and ensure that city-dwellers have a beautiful countryside to visit at weekends. They will therefore not regard any investment by farmers in pursuit of additional subsidies as rent-seeking. Attributions of rent-seeking are a matter of political taste. To accuse someone of rent-seeking is to say that you do not approve of what it is their investment is intended to secure. Tullock believes that the free market should be protected from government intervention and so considers resources invested in the pursuit of rents to be rent-seeking. Tullock, seeing a Harberger triangle, also sees a Tullock rectangle. Others who believe that some proposed intervention is in the public interest will however see neither.

Chapter 8

Rationality

Overview: In this chapter I examine and critically assess two of the core assumptions of rational choice theory; that individuals are rational and self-interested. It identifies two ways in which rationality might be defined and defended. In the first a rational person is someone who's preference-ordering over bundles of goods and services is reflexive, complete, transitive and continuous. In the second a rational person is someone who possesses optimal beliefs and acts in optimal ways given those beliefs and desires. Each of these definitions is critically appraised. The first involves making controversial claims about the content and structure of individual preferences and ties rational choice theory to an 'instrumentalist' conception of social science. The second is both descriptively inaccurate – people do not always hold optimal beliefs and do not always act in optimal ways – and theoretically self-defeating. It is self-defeating because if people do indeed act optimally then the costs of acting rationally are likely to be such that they will often be led to act in sub-optimal ways. By identifying those instances in which individuals will find it in their interests to act in optimal ways we can, however, pinpoint those circumstances in which rational choice explanations will prove effective. The result is a qualified defence of the assumption of rationality. In the final part of the chapter I go on to discuss the assumption of self-interest and, in doing so, extend this argument.

Introduction

In the opening chapter I stated that rational choice theorists employ an instrumental conception of rationality in which actions are judged as being rational to the extent that they constitute the best way of achieving some goal. I have subsequently said very little about the nature or status of this assumption; preferring, instead, to show how it has been 'cashd-out' in practice. But rationality is a controversial assumption to make in so far as most political scientists would argue that individuals operate with, at most, a 'bounded' rationality (see Box 1.4). The assumption of rationality is one which must not only be stated, but justified.

The most important claim I make in this chapter is that there are two very different ways in which an instrumental conception of rationality might be understood. The first, the 'axiomatic' approach, finds its roots in the psychology of behaviourism (Box 8.1) and the practice of neo-classical economics. It defines rationality in terms of a person's

Box 8.1 Psychological behaviourism

In the introductory chapter I noted the pioneering role, in the postwar years, of 'behaviourists' in responding to the challenge of developing the theoretical foundations of political science. Their work was inspired by the arguments of behavioural psychologists like John Watson (1919, 1928) and B.F. Skinner (1953, 1972). Behavioural psychologists, Watson and Skinner included, may be understood as making three principal claims.

Firstly, that we cannot directly observe mental phenomena and that reference to them in explanations of individual behaviour must therefore be entirely inferential, non-falsifiable and unscientific. Behavioural psychologists do not deny the ontological reality of mental states such as fear and expectation; they do, however, maintain that such states have no explanatory force. Secondly, that what Skinner calls 'mentalistic' explanations – i.e. explanations which invoke the existence of such mental states – are not only unscientific but redundant. They are redundant because they simply restate the facts of physical behaviour in a more obscure language. Behaviourists argue that mental states are displayed through and are synonymous with physical behaviour. When we say that somebody is hungry (mental state) and that they are eating (physical behaviour), 'a single set of facts [is being] described by the two statements' (Skinner, 1953: 30). Thirdly, that it is possible to explain animal and human behaviour in terms of external physical stimuli, responses and behavioural reinforcements without reference being made to mental states.

Psychological behaviourism was an immensely influential theory within the social sciences from around the 1930s until the early 1970s. During this period, most economists came, for example, to accept the behaviourist's argument that scientific explanations could not take a mentalistic form. Yet psychological behaviourism, together with its political science cousin, has now fallen upon harder times. The claim that mental states are displayed through and are synonymous with physical behaviour and that mentalistic explanations are therefore entirely redundant is now generally regarded as being misleading. Mental states may generate dispositions to behave in particular ways but they are not the same as those dispositions. We can feel what we feel before we act upon those feelings and it is an important part of what it means to be human that we can sometimes resist the urge to behave in a particular way.

possession of a preference-ranking which satisfies certain logical criteria. The second, the 'optimizing' approach, draws more on everyday 'folk psychology'. It defines rationality in terms of a person's possession of optimal beliefs, and their selection of those actions which can best realize their desires given those beliefs. Which of these two approaches is the more defensible? Part of the answer to this question will depend upon what it is that satisfactory social science explanations are thought to involve; an issue addressed more carefully in the following chapter. Nevertheless, I argue here that the axiomatic approach, although often presented as making a minimal set of demands on what constitutes rational action, actually makes a number of controversial claims about the content and structure of individual preferences. I also argue that the axiomatic approach naturally lends itself to an 'instrumentalist' conception of social science and that this is, for rational choice theory, a potential hostage to fortune.

In the case of the optimizing approach I suggest that an unqualified assumption of rationality is self-defeating. If people are always rational in the sense of always selecting optimal actions, they will often act in sub-optimal ways. People do not acquire optimal beliefs or take optimal decisions by chance. In order to acquire optimal beliefs they must deliberate about what it is that they believe and in order to take optimal actions they must then deliberate about how they are going to act. This process is a costly one which rational people will seek to economise upon even though their doing so will routinely lead them to possess sub-optimal beliefs and to act in sub-optimal ways. But damning as this criticism might appear for rational choice theory; the optimising approach is not without value. For in certain situations it *will* be optimally rational for people to act in optimal ways and when this is the case rational choice explanations *may* prove successful. Part of the task rational choice theorists *and* their critics face is of identifying when and where the optimizing account is a defensible one.

The axiomatic approach

Individuals are called upon to and are blessed with the capacity to make choices. In our everyday lives we must choose whether to go to work or phone in sick, whether to save or spend, whether to buy apples or pears. In the political arena, politicians must choose whether to adopt those policies they believe will appeal to the median voter and chief executives must choose whether or not to invest in the pursuit of

some rent. The choices people make can be said not only to reveal their preferences but to be constitutive of them. If a person must make a choice between A and B and chooses A, we can say that they preferred A (Box 8.2). If we look at a *series* of choices a person makes between different bundles of goods and services, their choices constitute their preference-ordering.

Assume now that individuals' preference-orderings satisfy four conditions. (i) *Reflexivity*: this requires that any bundle is always as good as itself. (ii) *Completeness*: imagine there are just three bundles of goods, A, B and C; a person's preference-ordering is complete if they either prefer one bundle to another (for example $A > B$) or are indifferent between them (for example $A = B$). (iii) *Transitivity*: a person's preference-ordering is transitive if it is consistent; consistency requires that if a person prefers A to B and B to C that they also prefer A to C. (iv) *Continuity*: this requires that, given any two goods in a bundle, it will always be possible to identify another bundle which that person is indifferent to by either fractionally increasing the amount of one good in the bundle or reducing the amount in another.

If and when someone's preference-ordering satisfies these conditions it can be represented by a utility function which assigns a number to each possible bundle of goods such that for any pair of bundles, A and B, when A is preferred to B, the utility associated with A is higher than that of B. In such cases it will be 'as if' the individual, in making their choices, judged different bundles according to the utility they generated and always chose that bundle which maximized their utility (Hargreaves-Heap *et al.*, 1992: 6–7).

We have so far talked about preferences, utility and choices. What, though, of the subject of this chapter, rationality? The link here is quite a simple one to make. A person is rational if they are instrumentally rational, they are instrumentally rational if they have a preference-ordering which is reflexive, complete, transitive and continuous, and if they have such a preference-ordering their rationality will manifest itself in utility maximization.

There are many practical advantages for rational choice theorists in using the axiomatic approach. Most importantly, and as I will now go on to argue, it allows them to sidestep potential objections to the assumption of instrumental rationality and so to get on with the business of formulating theories:

- 1 In order to justify the assumption of rationality within any particular theory, whether it is of party competition or budget acquisition,

Box 8.2 Revealed preference theory

Say we want to know whether a person prefers apples to pears. We could simply ask them what they prefer, but this is not always a reliable strategy to pursue. At times people have an incentive to mislead others about what it is that they want. At other times people do not have sufficient reason to really think carefully about what it is that they would want if left to choose. As psephologists and opinion pollsters are aware, the way in which people say they are going to vote in an election cannot always be taken as an accurate indication of how they will actually vote. The alternative way forward here is therefore to look at people's behaviour as it is revealed by their actual choices. If we want to know whether a person prefers apples to pears, we ought to give that person a choice between apples and pears to see which one they *choose*. If they choose apples rather than pears then they can be described as having demonstrated a revealed preference for apples over pears.

Revealed preference theory, which is sometimes invoked by rational choice theorists (Buchanan, 1979; Buchanan and Tullock, 1962), was developed by an economist, Paul Samuelson, in the 1940s. Once applied to consumer behaviour, revealed preference theory allowed economists to eliminate all references to such terms as utility, indifference and preferences (understood as a desire for one good over another) from their analyses of market exchanges. This was significant because psychological behaviourists argued that reliance upon such terms was entirely unscientific.

The problem with revealed preference theory is that our behaviour (choices) does not always reveal an accurate or complete account of our preferences (Hausman, 1992: 19–22). Consider the prisoner's dilemma game first introduced in Chapter 5. In a one-shot game, instrumentally rational actors will 'defect' rather than 'cooperate' even though both are worse-off by doing so. If we want to apply game theory by saying that a group of particular people have found themselves caught in a prisoners' dilemma, we need to be able to attribute to them a preference-ranking in which each most prefers an outcome in which they are the only person to 'confess' and least prefers the outcome in which they are the only person not to do so. But if we accept the basic tenets of revealed preference theory then the only behaviour we will see and be able to infer a preference from is people's decision to defect. But this does not tell us very much. In particular, it does not tell us that they defected because they were caught in a prisoner's dilemma in which taking the individually rational course of action nevertheless led to a collectively sub-optimal outcome.

it might be thought that rational choice theorists would have to establish that actors really do have reflexive, complete, transitive and continuous preference-orderings. Yet this is not the case. Rational choice theorists can instead follow economists in maintaining that the assumption of rationality is axiomatic in the sense of having 'only to be stated to be recognized as obvious' (Robbins, 1935: 78). Rationality, far from being a controversial assumption requiring a great deal of carefully justification, is entirely self-evident and in no need of further discussion.

- 2 Critics of rational choice theory routinely argue that people are not self-interested. Yet once it assumed that people have reflexive, complete, transitive and continuous preference-orderings, their actions can be analysed and understood *without* having to make any assumptions about whether they are self-interested. Rational choice theorists need to assume that people will consistently choose one bundle of goods over another. They do *not*, however, need to make any assumptions about why people prefer one bundle of goods to another. The reason why people prefer one bundle of goods to another is, in a sense, entirely irrelevant to the practice of rational choice theory and so arguments about self-interest are entirely misplaced.
- 3 Once it is assumed that people are rational in the sense of having a preference-ordering which is reflexive, complete, transitive and continuous, rational choice theorists can analyse actors' behaviour on the assumption that it reveals their preferences. Rational choice theorists using the axiomatic approach do not therefore have to 'peer' inside the minds of the people whose actions they are trying to account for in order to discern their beliefs and desires. For a behaviourist this is important because attempts to peer inside and understand people's minds are doomed to failure. Whether or not this argument is thought plausible, the focus on behaviour is also important in so far as rational choice theorists find themselves having to account for the behaviour of a large number of actors. It would, if nothing else, be extremely time-consuming to have to peer inside the minds of a large number of actors before conducting any research. The axiomatic approach absolves rational choice theorists from the need to do so.
- 4 Rational choice theorists do not, in practice, study actors' choices in order to discern their preferences before then constructing theories; they instead use models which make assumptions about what it is that actors prefer. Downs does not show that politicians prefer more

votes to fewer votes, he simply assumes that this is so. But how can we know whether the assumptions made in rational choice models tell us something about the preferences of actors in the 'real world'? Instrumentalists side-step this question by arguing that theories ought to be judged in terms of the accuracy of their predictions rather than the realism of their assumptions (Box 8.3). In so far as they commit themselves to such a position, rational choice theorists can thereby argue that debates about whether or not people are 'really' rational miss the methodological point. What counts is not whether people really are rational but whether rational choice theory can be used to predict outcomes and events.

In identifying the weaknesses of the axiomatic approach, I will concentrate upon the first and fourth of these arguments and postpone the discussion of self-interest until the end of the chapter. The first argument, it will be recalled, is that the attribution to people of reflexive, complete, transitive and continuous preference-orderings is simply axiomatic. Yet critics might argue that there is actually plenty of evidence to suggest that peoples' preferences do not always conform to such standards. (i) People do not always have complete preferences; they do not have complete preferences because they do not usually have preferences over goods they have not heard of, experiences they have not yet tried and ways of life they have not contemplated (Hollis, 1987: 21). (ii) People often have intransitive preferences; this is because they compare alternatives across different dimensions. Imagine a person who faces a choice between voting for parties A, B and C; they compare A and B in terms of their policies and prefer A, compare B and C in terms of their leaders and prefer B, and compare C and A in terms of their probity and prefer C. Yet the result is a intransitive preference ranking of $A > B$, $B > C$ and $C > A$. (iii) People do not always act to maximize their utility; they instead sometimes act out of a sense of duty or obligation (Sen, 1977, 2002). Imagine that we face a choice between visiting an uninteresting relative and going to the beach. When describing our dilemma to someone else we might say that we would prefer to go to the beach but that we will visit our relative because we think this is what we should do. Yet if people are instrumentally rational in the way stipulated here, such behaviour cannot make any sense.

The fourth argument was that the assumption of rationality lends itself to an instrumental conception of science and that this reduces the pressure on rational choice theorists to justify the assumption of rationality. The first problem here is that many scientists, of both the

Box 8.3 Instrumentalism

Instrumentalism is the name given to the view that scientific theories do not make claims about how the world is which should be assessed and judged as being literally true or false. Instrumentalists argue that theories ought to be viewed as instruments; that is as tools which we can use to understand the world (Rosenberg, 2000: 93–6). For this reason they should be judged in terms of the rigour and accuracy of their predictions rather than the realism of their assumptions. Within the natural sciences, instrumentalism is a venerable methodological tradition, but within the social sciences the instrumentalist position was not clearly articulated until the early 1950s. Milton Friedman's (1953) essay on 'The Methodology of Positive Economics' is, as Daniel Hausman (1992: 162) observes, 'by far the most influential methodological statement [within economics] of the century [and] the only essay on methodology that a large number, perhaps even a majority, of economists have ever read'. This is significant because Friedman actually articulates and defends a particularly extreme version of instrumentalism.

Friedman starts his essay by asserting that 'the only relevant test of the validity of a hypothesis is comparison of its predictions with experience' (pp. 8–9). Only when two theories have equally good predictive records is it appropriate to compare them in terms of other criteria such as 'simplicity' or 'fruitfulness'. Turning to the question of whether it is ever appropriate to judge a theory in terms of the 'realism' or accuracy of its assumptions, Friedman argues that it is not. Indeed at one point he seems to suggest that significant theories, by which he appears to mean



natural and social variety, argue that we ought to be more interested in explaining why something happened than predicting what will happen. Successful prediction may sometimes be useful in so far as it reassures us that our explanations are correct, but we should not assume that a model which successfully predicts some phenomena *must* therefore also constitute a successful explanation of it. Cliché as it may be, it is nevertheless true that correlation does not always mean causation.

The second problem is that critics like Green and Shapiro (1994: 6) maintain that tests of rational choice theory 'have either failed on their own terms or garnered theoretical support for propositions that, on reflection, can only be characterised as banal'. Green and Shapiro's argument is, as I emphasized in the opening chapter, a controversial one. Critics argue that they base their conclusions on a selective and often dated review of the literature (Fiorina, 1996) and

→ those that generate non-obvious predictions, 'must be descriptively false in [their] assumptions' (p. 14). In defending this view he relies upon the following example (pp. 19–20). Consider the position of a scientist trying to explain the density of leaves around a tree. Imagine he proceeds by assuming that the leaves are positioned as if they had deliberately sought to maximize the amount of sunlight they received, as if they knew the physical laws determining the amount of sunlight they would receive in various positions, and as if they were capable of instantly and effortlessly moving from one place to another. These assumptions can be used to construct a model capable of accurately predicting how the leaves will fall around the tree. Does it matter that the assumptions are false? Friedman argues that it does not. All that counts is prediction and so the fact that the leaves do not have the properties attributed to them is not 'vitally relevant' (p. 20).

Beyond these headline quotes, Friedman's argument is actually a great deal more subtle. At one point he accepts that scientists are entitled to judge whether a theory is likely to make accurate predictions by assessing the realism of its assumptions prior to formal testing. Elsewhere, he accepts that theories which have more realistic assumptions are more likely to successfully predict a wider variety of phenomena. As far as I can see, the implication of these claims is that the realism of assumptions does matter in important ways. Yet such qualifications tend to get ignored. As he has been interpreted by several generations of economists, Friedman demonstrates that theories ought to be judged in terms of the accuracy of their predictions and not the realism of their assumptions, the assumption of rationality included.

that rational choice theory *has* often been used to generate successful predictions (see De Mesquita, 2004). Critics might also argue that Green and Shapiro do not understand the nature and requirements of successful prediction. Social scientists ought not to be in the business of making 'point' predictions about specific events but rather predictions about what will happen *if* the world changes in particular ways (see Samuelson, 1972). Political scientists ought not to be predicting who will win the next election, but what will happen to support for the incumbent government *if* there is an economic recession. I do *not* want to reach any final judgements about Green and Shapiro's argument here. The point I want to make is simply that *if* Green and Shapiro are correct in arguing that rational choice theory has an unimpressive predictive record, instrumentalism becomes a rather unfortunate peg on which to hang a defence of the assumption of rationality.

The optimizing approach

Philosophers use the term folk psychology to refer to the conceptual scheme by which we predict and explain peoples' actions on the basis of the beliefs and desires we attribute to them (Cottrell, 1995: 161). Folk psychology assumes that people are rational in the sense that they have reasons to believe what they believe; reasons to act in the way that they act given their beliefs and desires, and that their beliefs and desires actually cause them to act in the ways that they act through the creation of an intention (see Davidson, 1980). Now there is obviously more that could be said here about what ought to be counted as a reason and about the way in which reasons can cause actions. But at this point I simply want to observe that rationality, when defined in this way, might not seem so unreasonable an assumption to make. Most of us proceed in our day-to-day lives by assuming that people are rational and by successfully using this assumption to make predictions about how people will act (Dennett, 2002). This is not to say that people are *always* rational. People sometimes deceive themselves into believing something they know to be false but which they want to be true (Finagrette, 1989). At other times they succumb to *arkasia* or weakness of the will (Elster, 2000). As anyone who has tried to quit smoking will know, having a reason to act in a particular way and wanting to act in that way does not necessarily guarantee acting in that way. But it is not difficult to imagine how behaviour of this sort might be presented as the pathological exception to a general rule of rationality.

Rational choice theorists do not, however, simply define rationality in this way. They equate rationality not simply with reason but with optimality (Elster, 1985, 1986). When rational choice theorists assume that people are rational they are not simply assuming that people have reasons to believe what they believe. They are assuming that their beliefs are the best possible beliefs they could have given the information available and that this is the reason why they believe what they believe. In a similar way, when rational choice theorists assume that people are rational they are not simply assuming that they have reasons to act in the ways that they act. They are assuming that their actions were the best possible actions they could have taken given their beliefs and desires.

Understood in this way, rationality is a term we can use to describe particular beliefs and actions or, more generally, the people whose beliefs and actions they are. Rationality is, in a sense, an output. But this begs the following question. How is it people can come to act

optimally? One possible answer to this question is provided by Amartya Sen (2002) and John Searle (2001). They argue that rationality is best understood not as an output but as a process. People, they argue, ought to be described as rational to the extent that they *deliberate* or *reason* about what it is that they ought to believe and how it is that they ought to act:

In the normal case of rational action, we have to presuppose that the antecedent set of beliefs and desires is not causally sufficient to determine the action. This is a presupposition of the process of deliberation and is absolutely indispensable for the application of rationality. We presuppose that there is a 'gap' between the 'causes' of the action in the form of the beliefs and desires and the 'effect' in the form of the action. This gap has a traditional name. It is called 'freedom of the will'. In order to engage in rational decision-making we have to presuppose free will. Indeed . . . we have to presuppose free will in any rational activity whatever . . . to see this point you need only consider cases where there is no gap, where the belief and the desire really are causally sufficient. This is the case, for example, where the drug addict has an overpowering urge to take heroin; so, compulsively, he takes it. In such a case the belief and the desire are sufficient to determine the action, because the addict cannot help himself. But that is hardly the model of rationality. Such cases seem to be outside the scope of rationality. (Searle, 2001: 13–14)

Searle and Sen present this distinctive account of what rationality entails because they want to show how people can acquire 'desire-independent reasons' for acting out of a sense of duty or obligation. I want to use their argument in a different way. It is their capacity for deliberative rationality which allows people to act in optimal ways. But people often regard the exercise of this capacity as costly in terms of both time, effort and, in the case of difficult decisions, mental anguish. As economists would put it, the exercise of deliberative rationality has a positive opportunity cost. Time spent deliberating about some belief is time that cannot be spent in other ways. Time spent deliberating about one issue is time that cannot be spent deliberating about another issue. The claim that deliberation is costly is certainly not true of all the decisions we deliberate about. There are some things we enjoy deliberating about and some people would regard it as being a huge and perhaps unbearable cost if they did not have the opportunity to deliberate about anything.

But all that is being claimed here is that people do not enjoy deliberating about everything and that people do not want to deliberate all the time.

It is a fundamental assumption of economics that people economize on scarce resources. Given a limited amount of money, people will spend that money on the goods they most prefer. Given a limited amount of time, people will spend that time with the people they most want to spend it with. To say that people are economizers is not to say anything new. The assumption that people economize is contained within the assumption that they act in an optimal manner. But once it is recognized that the exercise of deliberative rationality is costly and that people will therefore economize upon it, we can see why people may not always *act* in an optimal way. People will only invest in the exercise of deliberative rationality up to that point where the marginal benefits of doing so are greater than the marginal costs. Beyond this point, people will not be acting optimally if they invest in the exercise of deliberation even if their doing so would allow them to act in a more optimal way. The problem with the claim made by rational choice theorists that people always hold optimal beliefs and always act in optimal ways is that it is self-defeating. For if people act optimally, they will sometimes act in sub-optimal ways.

In a moment I will consider the implications of this argument for the explanatory reach of rational choice theory. Before doing so I will, however, sketch the terms of a possible objection. I have argued that rational people will not always act in optimal ways because doing so will require a sub-optimal investment in deliberation. But this would seem to assume that people make optimal decisions about how much to invest in the exercise of their deliberative capacities. Yet it might be argued that it is *precisely* the issue of whether people make optimal decisions that is in dispute. So how might the claim that people make optimal decisions about how much to deliberate be defended? It might be argued that people make optimal decisions because they deliberate about how much they ought to deliberate, but this simply leaves us grappling with the same problem at a different level. For we then need to establish why people make optimal decisions about how much to deliberate (about how much to deliberate). If we then argue that people make optimal decisions about how much to deliberate about how much to deliberate (about how much to deliberate) we are simply creating an infinite regress.

The reach of rational choice

For many of its practitioners, a part of the appeal of rational choice theory lies in its promised universalism; its claim to be able to explain any and every aspect of political life (Ferejohn, 1991; Green and Shapiro, 1994: 23–8). Now, in so far as rational choice theorists define instrumental rationality in terms of the axiomatic approach, this would indeed seem to entail a commitment to universalism. For if we assume that peoples' preference-orderings are reflexive, complete, transitive and continuous, and justify this assumption as being axiomatic, there are no obvious grounds for then arguing that people will act rationally at some times but not others. Yet, by contrast, it is one implication of my argument about the optimizing approach that rational choice theory cannot be used to explain any and every political action. Rational choice explanations which assume that people possess optimal beliefs and act in optimal ways given their beliefs and desires will only prove successful when an (optimally) rational person would act in (optimally) rational ways. Can we say anything about the circumstances in which this condition will be satisfied? Three very general propositions suggest themselves:

- 1 People will, all other things being equal, invest more time deliberating about those issues they believe are important. Given the link between the exercise of deliberation and the selection of optimal actions, we might therefore say, all other things being equal, that people will be more likely to act in an optimal way when the beliefs they must choose and the actions they must take have important consequences.
- 2 As I have already noted, people do not *always* regard the exercise of their deliberative capacities as a cost. People enjoy thinking about some issues. People will invest more time deliberating about those issues they enjoy deliberating about. Given the link between the exercise of deliberation and the selection of optimal actions, we might therefore say, once again all other things being equal, that people will be more likely to act in an optimal way when deliberating about beliefs and actions they enjoy deliberating about.
- 3 Some decisions are more difficult to take than others either because a larger range of options have to be considered or because the relationship between options and outcomes is uncertain. So, for any given investment in the exercise of deliberation, an investment which, as we have seen, will depend upon the importance of the issue

and the costs of deliberating about it, it is more likely that people will act in an optimal way when the choice is an easier one to make.

How does this bear upon the rational choice theories we have been examining? It would appear to me that the first proposition is the least problematic for rational choice theory and the third the most problematic. The first proposition is the least problematic because in many of the cases we have been examining the choices actors must make would indeed appear to have important consequences for their welfare. It would not, for example, seem unreasonable to suggest that politicians will carefully deliberate about what electoral strategy their party should adopt or that bureaucrats will carefully deliberate about how large a budget to seek from their political sponsors. For in these cases it is fairly obvious how the selection of the right electoral or budget strategy can make a significant difference to a person's welfare. There are, however, exceptions here. It is not at all obvious why people will deliberate carefully about who to vote for or whether to contribute a small amount of money to some collective endeavour. In such cases, people may have reason to act expressively rather than instrumentally (see Box 7.2).

Turning now to the third proposition, rational choice models are of course simplifications. They present actors with unambiguous choices and clearly specify the relationship between those choices and eventual outcomes. It is not hard to see how actors in these models might succeed in maximizing their utility. In reality, political actors operate in a more complex and messy environment. They must routinely choose between a large number of courses of action and must often do so without knowing with any certainty what the pay-offs associated with each choice are. Consider, for example, Downs' model of party competition. Here, it is assumed that party leaders not only know what policies are available but what the levels of support for each of these policies are. This is not plausible. Even in an age of focus groups and private opinion polling, politicians cannot always know how a policy they are about to commit themselves to now will be regarded in the future. Politicians often lose elections not because they deliberately chose to adopt unpopular policies but because they failed to spot which the most popular policies were. To the extent that uncertainty is a pervasive and inescapable feature of political reality, the assumption that actors have the best possible beliefs and that their actions will be the best possible actions they could take given their beliefs and desires appears problematic.

What, finally, of the second proposition that people will deliberate more carefully about those issues they enjoy deliberating about? Here, there might be more comfort to be drawn for rational choice theory. For whilst different people no doubt enjoy deliberating about different things, it does seem conceivable that politicians, bureaucrats, interest-group leaders and other actors who have chosen a career in politics will have chosen that career partly *because* they enjoy deliberating about politics. It is also possible that those actors who have risen to positions of authority within political parties, bureaucracies and interest-groups, have done so partly because they are good at making the right decisions. Successful politicians confront as complex a political environment as you or I; they are, however, presumably better able to cope with it.

Self-interest

Having largely skirted around the subject so far, I will finish this chapter by saying something about the status of the assumption of self-interest within rational choice in general and the optimizing account of rationality in particular. In the opening chapter I presented self-interest as being one of the core assumptions of rational choice theory; yet I also noted that rational choice theorists do not *need* to assume self-interest. Laver and Shepsle's portfolio-allocation model, which we examined in Chapter 3, offers, in many respects, an exemplar of the potential of rational choice theory. Yet it explicitly assumes that politicians have a consummate commitment to particular policies. But it nevertheless remains the case that most rational choice theory, and most of the theories examined here, do assume that actors are self-interested. What though of the earlier argument that the axiomatic approach allows rational choice theorists to avoid having to make any assumptions about whether people are self-interested? How can this be reconciled with my argument that self-interest is a core assumption of rational choice theory? The answer here lies in another of the arguments previously outlined. It is true that the use of the axiomatic approach means that rational choice theorists do not have to reach any judgements about why people prefer one bundle of goods to another. Yet, as I have also argued, rational choice theorists do not, in practice, ground their theories upon detailed examinations of actors' behaviour. They instead use models which make assumptions about actors' preferences and these models, by and large, assume that actors are self-interested and that their preferences reflect their self-interest.

So how might the assumption of self-interest best be defended? The most obvious argument here, and the one to which rational choice theorists do sometimes commit themselves, is that people really are self-interested (see Tullock, 1976: 5). I will consider this argument in a moment. Before doing so it is, however, worth emphasizing that there are a number of other ways in which the assumption might be defended which do not require us to maintain that people are necessarily self-interested:

- 1 *Instrumentalism*. As I have already noted in the case of rationality, rational choice theorists can commit themselves to the instrumentalist position that theories ought to be judged in terms of the accuracy of their predictions rather than the realism of assumptions such as that of self-interest. Having discussed this argument in the previous section, I will not say anything more about it here.
- 2 *Protection from knaves*. It might be argued that rational choice theory shows us how institutions and policies would work *if* people were self-interested. Why would we want this information? Because it allows political scientists to design policies and institutions which will work if and when they are used by people a number of whom are likely to be self-interested. Rational choice theory can, in this way, be used to protect us from 'knaves' (Hume, 1741: 40) (see Pettit, 1998, for a more detailed discussion). Consider the theory of rent-seeking. We do not necessarily need to believe that every firm will ruthlessly pursue any opportunities to acquire rents in order to believe that we ought to design institutions which can minimize the incidence and costs of rent-seeking.
- 3 *Economizing on virtue*. In a similar vein it might be argued that whilst no one acts in a self-interested manner all of the time, that there is only a limited amount of altruism to go around. In order to economize on this precious resource it is therefore better, where possible, to design and rely upon institutions and policies which can reconcile the pursuit of self-interest with the achievement of the collective good (Brennan and Hamlin, 1995). Rational choice is a useful theory because it allows political scientists to understand how best to economize on virtue.
- 4 *Revealing hypocrisy*. Politicians and other political actors routinely claim that they are acting from the highest of possible motives: that they are driven purely by a desire to promote the public interest. No doubt such claims are sometimes correct. As I noted in the opening chapter, we live in a world in which not only do millions of ordinary

people volunteer to defend their country, give blood and donate money to charity, but in which politicians sometimes do go to jail for their beliefs. But no doubt such claims are also often self-serving cant. Rational choice theory can perform a useful function by showing how politicians' actions might be understood as an expression of their self-interest (see Weale, 1999: 103). For those on the political left who are often the most suspicious about the motives of politicians and others in political authority, rational choice may be a particularly useful analytical tool.

What, then, of the argument that people really *are* driven by self-interest? This does not seem particularly plausible. For in previous chapters we have seen: (i) that the outcome of coalition negotiations can be more effectively explained and predicted if it is assumed that politicians have consummate policy commitments; (ii) that people routinely act contrary to their self-interest in co-operating with each other in a one-shot prisoner's dilemma game; and (iii) that we can best account for the costs of rent-seeking by assuming that politicians have to provide a public interest 'cover' for their actions. This does not mean that the assumption of self-interest is beyond salvation. Rather than argue that everyone is self-interested all of the time, it might make more sense to argue, as we have already done in the case of rationality, that people are more likely to act in self-interested ways when the costs of not doing so are higher.

Just such an argument has been offered by the philosopher Philip Pettit. Contrary to the standard assumptions of rational choice theory, he suggests that people routinely consider other people's interests when deciding how to act. But he also argues that if and when the results of their actions plunge them below their 'aspiration level' that they will then start to take more account of their own interests. Although self-interest does not always cause people to act in particular ways, it is nevertheless a 'standby cause' in the sense that it retains a 'vital presence that puts constraints on how . . . actual behaviour is likely to go' (1996: 275). What determines a person's aspiration level? Pettit suggests that it will usually be determined by their normative reference group. A person will start to take more account of their self-interest once their social and economic position is jeopardized relative to this group. To use Pettit's own example, a manual worker will not necessarily start to act in a more self-interested way simply because their position has deteriorated relative to that of a company director. They will, however, be led to consider their position if they are unable to maintain the same lifestyle as the colleagues with whom they identify.

To this argument I simply want to add one brief footnote relating to the impact of social norms. As I have already noted, norms tell people how to act in particular situations and are not outcome-orientated. As I have also argued, the existence of norms cannot always be reduced to and explained in terms of people's long-term self-interest. Simply because we all benefit in the long-run from the existence of a norm requiring us to form a queue; we cannot thereby infer that the norm exists *because* it is in everybody's self-interest that such a norm exists. Yet once they have been established, norms do sometimes make it in people's self-interest to behave in particular ways because there are often social costs attached to breaking that norm. People do not simply join a queue because they think they ought to do so; they join a queue because they will be chastised for not doing so. This bears upon our previous argument because one set of norms in society govern the extent to which it is appropriate to act in a self-interested manner. Such norms dictate that it is, for example, not only inappropriate but reprehensible to behave in a self-interested manner with friends and family but entirely acceptable to do so when negotiating the price of a house sale. I have argued that people are more likely to act in a self-interested manner when the costs of not doing so are higher. Yet if there exists a norm proscribing self-interested behaviour in a particular situation and if there are costs attached to violating this norm, it may be in a person's self-interest to act in another-regarding manner in order to adhere to that norm. In such cases, the higher the costs attached to violating the norm, the more likely it is that actors will, *qua* Pettit, find it in their interests to abide by it.

What norms are there regulating the pursuit of self-interest within the political arena? Within the kind of liberal democracies we have been examining in this book, it is, on the one hand, possible to discern a normative expectation that politicians and other actors ought to put the public interest ahead of their own interests. Certainly politicians routinely castigate each other for failing to do precisely this and it is difficult to make sense of such attacks unless there is a norm proscribing such behaviour. Yet, at the same time, and as I noted in the opening chapter, recent decades have seen the growth of a 'tabloid' political culture which maintains that politicians only care about getting elected, that bureaucrats are all lazy, and that local councillors are all corrupt. The suspicion must be that we live in a world in which more and more people expect political actors to behave in a purely self-interested manner, in which the costs of behaving in precisely this way are much lower, and in which the assumption of self-interest has become a

self-fulfilling prophecy. Rational choice theory is well suited to the analysis of such a world. Indeed by so zealously propagating the view that people are self-interested and that the pursuit of self-interest can sometimes be reconciled with the achievement of the public good, rational choice theory may, in some small way, have contributed to its emergence (see Box 6.3).

Chapter 9

Rational Choice Explanation

Overview: Rational choice theory seeks to explain various political actions, events and outcomes. But what do such explanations involve? In this chapter I examine three very different accounts of what social science explanation ought to involve. Positivists equate explanation with the identification of general laws. Scientific realists equate explanation with the identification of causal mechanisms. Interpretivists equate explanation with the identification of the beliefs and desires which led a person to act in a particular way. It is routinely argued that rational choice theory offers an example of and is necessarily committed to a positivist mode of explanation. I argue that this is not the case. Rational choice theory can be understood as an exercise in positivism, scientific realism or, more problematically, interpretivism. In the opening chapter I noted that the rise of rational choice theory in the 1970s and 1980s was threatened by Green and Shapiro's argument that 'a large proportion of the theoretical conjectures of rational choice theorists have not been tested empirically' and that 'those tests that have been undertaken have either failed on their own terms or garnered theoretical support for propositions that . . . can only be characterised as banal'. In this chapter I suggest that the type of argument made by Green and Shapiro poses less of a problem for rational choice theory if its explanations are conceived of as exercises in scientific realism rather than positivism.

Introduction

Rational choice theorists do not simply try to describe political actions and events; they seek to explain them. That is they try to show not only what happened in some particular case but *why* it happened and, in doing so, to make something which had previously appeared puzzling seem entirely explicable. This point bears emphasis because political scientists often content themselves with elaborate descriptions of, for example, the foreign policy and legislative procedures of various countries leavened only with the occasional injection of technical jargon. Such descriptions are no doubt often impressively executed. But they are inherently limited. Whatever its other faults, and they are many, rational

choice theory deserves credit because it is engaged in the business of explanation, of showing why parties adopt particular policies (Chapter 2), why government has grown in the postwar era (Chapter 6) and why pressure groups are able to influence public policy (Chapter 7).

Does rational choice theory offer good explanations? In one respect it might be argued that this is not a particularly useful question. As I noted in the opening chapter, rational choice has polarized political science. There are those who argue that rational choice is the best thing to have ever happened to political science and those who regard it as having corrupted the discipline. Part of the objective I set for this book was to achieve a more balanced assessment of rational choice theory. On this basis it might therefore be concluded that some specific rational choice theories, my own favoured candidates being party competition, coalition-building and collective action, offer interesting and persuasive explanations of political events and that others do not. There is, in other words, no reason to reach any judgement about rational choice theory *per se*. Yet, at another level, the more general question is an interesting one in so far as it encourages us to think more carefully about what it is that good explanations entail.

Three possible answers will be considered. The first and 'positivist' answer is that explanations involve showing how something which happened could have been expected to happen in virtue of the existence of some law or set of laws. The second answer, which sometimes goes by the name of scientific realism, is that good explanations involve showing how something happened as a result of the operation of some causal mechanism. The third answer, which can be labelled interpretivist or hermeneutic, is that explanations involve identifying the reasons which led people to act in particular ways. Why does this matter? It matters because whether or not rational choice theory is thought to provide good explanations will depend upon what good explanations are thought to require.

Rational choice theory has usually been understood, by its proponents and critics alike, in positivist terms as attempting to formulate a 'science of politics' grounded upon the discovery of empirical laws. During the period in which rational choice theory first developed, in the late 1950s and 1960s, positivism was the methodological orthodoxy within the social sciences and this association between rational choice theory and positivism hugely benefited rational choice. As intellectual fashions changed in the 1980s and 1990s and positivism came under sustained intellectual fire, rational choice theory suffered because it was regarded by many political scientists as embodying the

pretensions and limitations of positivism. Yet, as I will go on to argue, in many ways positivism casts rational choice theory in a poor light because it ties the explanation of events to their successful prediction. There is, however, no reason why rational choice theory *must* be conceived of in positivist terms. In later sections I argue that rational choice theory can also be understood (and so defended) as involving the search for causal mechanisms or, more problematically, as being based upon an exercise in interpretative understanding.

Positivism and explanation through laws

The single most influential account of what constitutes a good explanation in both the natural and social sciences is provided by the German-born philosopher Carl Hempel (1905–97) (1942, 1962 and 1965). Hempel suggests that a good explanation of some outcome or event is a causal explanation, that causal explanations depend upon and are derived from laws and that laws are empirical regularities taking the form ‘Whenever X, then Y’. Consider the following examples. Newton’s law of universal gravitation states that two bodies attract each other with equal and opposite forces; that the magnitude of this force is proportional to the product of their two masses and is also proportional to the inverse square of the distance between the centres of the two bodies. Brewster’s law states that the extent of the polarization of light reflected from a transparent surface is a maximum when the reflected ray is at right angles to the refracted ray. Boyle’s law states that the product of the pressure and volume of an ideal gas at constant temperature is a constant.

Hempel argues that a scientific explanation of some outcome or event can be derived from (1) a set of ‘initial’ or ‘boundary’ conditions, and (2) a set of laws:

As an illustration, let the event to be explained consist in the cracking of an automobile radiator during a cold night. The sentences of group (1) may state the following initial and boundary conditions: the car was left in the street all night; its radiator, which consists of iron, was completely filled with water and the lid was screwed on tightly; the temperature during the night dropped from 39°F in the evening to 25°F in the morning; the air pressure was normal; the bursting pressure of the radiator material is so and so much. Group (2) would contain empirical laws such as the following: below 32°F, under normal atmospheric pressure, water freezes; below 39.2°F, the

pressure of a mass of water increases with decreasing temperature, if the volume remains constant or decreases; when the water freezes, the pressure again increases . . . *From statements of these two kinds, the conclusion that the radiator cracked during the night can be deduced by logical reasoning; an explanation of the considered event has been established* (Hempel, 1942 [1996: 44]) (emphasis added).

The first point I want to make about this explanation is that it is entirely deterministic. Given the temperature at night, the radiator had to crack. Explanations derived from laws explain not simply by showing why something happened but why it *had* to happen. However, on this issue Hempel eventually changed his position. Whilst continuing to argue that explanations must always rest upon the identification of one or more causal laws, Hempel accepted that it is possible to derive explanations from probabilistic laws taking the form 'Whenever X, then *usually* Y'. Suppose we want to know why someone died of lung cancer and we know that they smoked 40 cigarettes a day. We can explain their death in terms of a law linking smoking and cancer and we can do so even though some people who smoke do not get cancer and some people get cancers who don't smoke. Although the relationship between smoking and cancer is not deterministic, it does hold with a 'high [degree of] statistical probability' (Hempel, 1962 [1996: 22]) and this is enough for the purposes of explanation.

I now want to draw attention to one further feature of explanations derived from laws: the relationship they establish between prediction and explanation. Positivists commit themselves to what is known as the 'symmetry thesis'; the claim that the information needed to provide explanations can also be used to make predictions (Ruben, 1990: 123–5). Why did the water in the radiator freeze? Because it was left overnight in the cold and 'whenever X (water is cooled to below 32°F) then Y (it freezes). When *will* the water freeze? The answer is that it will do so when the evening temperature drops below 32 degrees. The symmetry thesis is an important one because if explanation and prediction are simply different sides of the same coin, explanations can be assessed in terms of the accuracy of their predictions.

The examples of laws I have so far cited are drawn from the natural sciences. The obvious question I now want to consider is this. Can social science explanations take the same basic form? Hempel argues not only that they can take the same form but that they actually do so in practice. This might seem a somewhat surprising claim because social scientists, rational choice theorists included, rarely mention laws

in their explanations. In Chapter 2 I referred to Duverger's law which links the existence of plurality voting systems to two-party competition. In Chapter 6 I also noted that Downs talks about the 'law of diminishing control' and the 'law of counter-control'. But no other references to the existence of laws have subsequently been made. So on what basis can rational choice theory be understood as an exercise in positivism? Two answers are worth considering:

- 1 Hempel argues that whilst social scientists do not appear to invoke or rely upon laws, such appearances are deceptive. Whether they appreciate it or not, social scientists, and even historians, invariably ground their explanations upon the existence of purported laws. As one example Hempel cites the claim that dust bowl farmers migrated to California in the 1930s because continual drought and sandstorms in the mid-West had made their existence increasingly precarious, and because California promised better living conditions. No mention of any empirical laws can be found here. But this explanation rests upon and is, Hempel argues, derived from an implicit and presumably probabilistic law that 'populations tend to migrate to regions which offer better living conditions' (Hempel, 1942 [1996: 47]). What, then, of rational choice theory? Whether it is described in terms of a law or not, rational choice theory rests upon the assumption that people are instrumentally rational and that their actions can be explained and predicted on this basis. The argument that political parties will converge upon the centre-ground, that individuals will not usually contribute to the provision of a collective good, that bureaucrats will attempt to maximize the size of their budget, and so on, are all built upon this nomological foundation.
- 2 Hempel argues that all of the social sciences proceed by assuming that people are rational. On this reading, rational choice theory differs from the other social sciences not because it assumes that people are rational but only because it *explicitly* assumes that they are rational. We might, however, give rational choice a more important and distinctive role within the social sciences by arguing that it attempts to show how, why and when the probabilistic laws invoked by other social scientists exist by constructing models in which those laws are endpoints of the actions and interactions of rational actors. Consider the theory of party competition. Journalists and political historians often argue that parties prosper to the extent that they capture the 'centre-ground' of politics. Following Hempel, we can say that this explanation rests upon and is derived from a probabilistic law, in this

case stating that 'whenever X (a party is believed by voters to occupy the centre-ground), then usually Y (it will be elected). But in *An Economic Theory of Democracy*, Downs does not simply empirically test this argument; through the construction of a model of party competition he instead attempts to specify the reasons why and the necessary and sufficient conditions in which parties find it in their interests to converge upon the centre-ground. He is not simply claiming the existence of a probabilistic law about the behaviour of political parties. He is instead showing how, why and when this probabilistic law might hold.

All other things being equal: tendency laws and the inexact (social) sciences

Let us accept for the moment the positivist's argument that explanation rests upon the identification of causal laws and that prediction and explanation are different sides of the same coin. Let us also accept that rational choice can be understood in positivist terms. The question I now want to ask is about whether, from the positivist's standpoint, rational choice explanations are good ones. In order to answer this question we will first have to look more carefully at the nature of laws and at Hempel's argument that natural and social science explanations take the same basic form.

Suppose we want to explain why a match lit when it was struck. It is not difficult to imagine formulating a law that 'whenever A (a match is struck), then B (the match will light). This is not the stuff of which Nobel prizes are made but it will do for illustrative purposes. But whilst striking a match may be necessary for it to light, it is not sufficient. The match will not light *if* C (it is wet), D (there is a strong wind), E (it is struck against the wrong material), F (there is no oxygen), and so on. The important lesson to be drawn here is that *all* laws are conditional and only hold when all other things are equal or *ceteris paribus*. This is as true of natural science laws as it is of social sciences ones (Cartwright, 1983; Hausman, 1992: 132–42). Newton's law of universal gravitation only holds in the absence of any magnetic forces. But for two reasons, the conditional nature of laws makes life much harder for social scientists:

- 1 Laws only hold all other things being equal. But in many of the cases where natural scientists are interested in predicting outcomes and

events, it just so happens that other things are equal or at least sufficiently equal. Consider, for example, predictions about tide times. Given some fairly basic information about gravitational laws and the position of the moon and sun, meteorologists can predict tide times in different parts of the country. But tide times in any one place also depend upon local conditions. Whether a beach shelves gently or sharply makes a difference to the time of high and low tides. Furthermore, the action of the tide can, over a period of time, affect whether a beach shelves gently or sharply. So the prediction that if A (the moon and sun are in a certain position) then B (high tide will be at a certain time) only holds *if* C (the beach does not shelf too sharply). But it just so happens that in most cases the difference C makes to tide times can be measured in minutes rather than hours. This means that meteorologists who know nothing about the slope of a particular beach can nevertheless make reasonably accurate predictions.

The problem social scientists face is that other things are rarely equal. Suppose that we are interested in predicting when there will be leadership contests within an incumbent governing party. Suppose our initial hypothesis is that leadership contests are often triggered by the resignation of a senior member of the government following a policy disagreement (rather than personal scandal). The relationship between resignations and leadership contests will however only hold all other things being equal. So we might say that if N (a senior minister resigns) then O (a leadership contests will occur) *if* P (the country is not at war), Q (the party is already behind in the opinion polls), R (there is a credible challenger), S (the party is already divided on ideological lines) and T (the minister challenges the prime minister's personal integrity in his or her resignation speech). In this respect, there is no difference between the social and natural sciences. All laws only hold all other things being equal. But in this case the presence or absence of each of these things (P–T) may make a great deal of difference to whether a resignation leads to a leadership contest. The slope of a beach does not usually make that great a difference to tide times. The presence or absence of a credible leadership challenger is likely to make a significant difference to the chances of a resignation leading to a leadership contest. So if they are to predict whether and when ministerial resignations will lead to leadership contests, political scientists will need to know what difference the presence or absence each of these factors makes.

- 2 The social scientist is at a further disadvantage here. All laws are conditional and only hold all other things being equal. I have argued that 'things' are sometimes equal in the natural sciences. But even when they are not 'naturally' equal, natural scientists can often *make* things equal through the careful design of laboratory experiments. The claim that a match will light when struck so long as there is no wind can be tested by first striking matches in a sealed room, and by then striking them in front of a powerful fan. Over the last few decades, political scientists have benefited from the establishment of research bodies like the Social Science Research Council (in the USA) and the Economic and Social Research Council (in the UK) which sponsor the collection of data-sets. As a result, social scientists can now sometimes test for the existence of causal relationships by analysing large amounts of data about past relationships. But these data-sets only contain a limited number of cases and for this reason social scientists find themselves in an inferior position to natural scientists who can manipulate conditions to ensure the absence or presence of specified factors and so run any number of experiments in order to establish the existence of causal relationships.

The relative paucity of data available to social scientists poses a particular problem because there is no guarantee that the factors they are interested in and which they believe make a causal difference to outcomes will interact mechanically in such a way that the presence of one factor always makes it more likely that the purported relationship holds. Consider, once again, the case of a leadership contests. Factors can be described as interacting mechanically if it is the case that the presence of a credible challenger makes it more likely that a resignation will lead to a contest whether or not the country is at war, whether or not the party is ahead in the opinion polls and so on. Yet there is no reason to believe that the world is arranged in such a convenient fashion. It may well be the case – and political scientists will have to find out whether it is the case – that a resignation is less likely to lead to a contest when there is a credible challenger, the country is at war, and the party is divided than when there is no credible challenger, the country is at war and the party is divided. What all this means is that political scientists have to know a lot more than natural scientists in order to make successful predictions.

Social scientists have long been aware of the problems posed by *ceteris paribus* conditions (see Hausman, 1992: 131–42 for a detailed

discussion). In his *Essays on Some Unsettled Questions of Political Economy*, John Stuart Mill (1806–73) (1844) [1948: 54] argues that because things are rarely equal, the social sciences are an ‘inexact’ science in which there are only ‘tendency laws’ from which it is only possible to derive ‘tendency predictions’. The relevant passage is worth quoting at some length:

Doubtless a man often asserts of an entire class what is only true of a part of it; but his error generally consists not in making too wide an assertion, but in making the wrong *kind* of assertion; he predicted an actual result, when he should only have predicted a tendency to that result – a power acting with a certain intensity in that direction . . . thus if it were stated to be a law of nature, that all heavy bodies fall to the ground, it would probably be said that the resistance of the atmosphere, which prevents a balloon from falling, constitutes the balloon an exception to that pretended law of nature. But the real law is, that all heavy bodies *tend* to fall; and to this there is no exception, not even the sun and the moon.

Tendency laws should not be confused with probabilistic laws. Recall Hempel’s argument that we can explain and predict outcomes and events using probabilistic laws in which the relationship between factors holds with a ‘high [degree of] statistical probability’. This argument is ambiguous because Hempel provides no indication of what constitutes a ‘high’ degree of probability. But for the reasons outlined previously, it is unlikely that the relationships social scientists find will usually satisfy even a relatively loose definition of what counts as a ‘high’ probability. The most the social scientist may be able to claim is the existence of a tendency law linking the two.

How does this apply to rational choice theory? Clearly the kind of causal relationships rational choice theorists are interested in only hold all other things being equal. Political parties will only converge upon the position of the median voter if there is one ideological dimension. Political parties will only form a minimal winning coalition if coalitions control their membership. People will not contribute to the provision of a collective good unless there are selective incentives. In the models rational choice theorists formulate, these other things are specified in terms of a precise list of assumptions. But in the real world to which these models are meant to be applied, things will not always be equal and these assumptions will not always hold. In such cases, the most rational choice theorists might be able to achieve is the formulation of

tendency predictions. So, on this basis it might be argued that political parties have a tendency to converge upon the position of the median voter, that political parties have a tendency to construct minimal-winning coalitions, that people will not tend to contribute to the provision of collective goods unless the 'number of individuals is quite small, or there is coercion', and that bureaucrats have a tendency to try and maximize the size of their budget.

Of what explanatory value are such tendency predictions? The obvious answer here is that they are better than nothing. Yet there is a potentially significant problem here. In a classic statement of the positivist philosophy, Karl Popper (1902–94) argues that scientific theories can be distinguished from non-scientific ones in terms of the predictions they make. Theories are scientific if they can be used to make predictions which can be falsified. Theories, and here Popper has his sights on Marxism and Freudian psychoanalysis, are unscientific if they do not make any predictions, or, and this amounts to the same thing, their predictions cannot be falsified. Philosophers of science have emphasized that it is actually almost impossible to formulate 'critical' tests that can be used to falsify theories. For no matter what happens in some experiment, scientists can always save their theory by proclaiming it to be unsuitable for direct empirical testing or by adding auxiliary hypotheses to account for particular and otherwise uncomfortable pieces of evidence. For this reason, Popper is now often dismissed as a 'naive falsificationist' (see Blaug, 1992: 17–21). Yet Popper, whose classic work *The Logic of Scientific Discovery* is, like most classic works, cited more frequently than it is read, recognizes this problem. He argues that it is precisely because scientists can be expected to adopt what he calls 'immunizing stratagems', that auxiliary assumptions should only be accepted if they 'do not diminish the degree of falsifiability or testability of the [theory] in question' (1959: 83).

Why does this matter? If, following Popper, it is the capacity to make falsifiable predictions which distinguishes scientific and non-scientific theories, then, if rational choice theory can only make tendency predictions, it may be that it ought not to be counted as a positivist science. In the case of economic theory this was precisely the point made, several decades ago, by Terrence Hutchinson in *The Significance and Basic Postulates of Economic Theory*. Drawing on Popper's work, Hutchinson argued that the tendency laws formulated by classical economists were essentially meaningless and that economists ought to devote themselves to the specification of precise and

falsifiable predictions. Yet the problem not only for economics but for rational choice theory is that such predictions have proven extremely difficult to formulate.

Scientific realism and the search for mechanisms

When the 'moral' sciences were first being consciously fashioned in the late eighteenth century, the Marquis de Condorcet (1743–94), whose work on voting was touched upon in Chapter 4, suggested that

the sole foundation for belief in the natural sciences is this idea, that the general laws dictating the phenomena of the universe are necessary and constant. Why should this principle be any the less true for the development of the intellectual and moral faculties of man than for the operations of nature? (Quoted in Hollis, 1995: 25)

Scientific realists like Tony Lawson (1997, 2003), whose work we will concentrate on in this section, argue that social science laws have not been discovered for the very simple reason that they do not exist. His argument is directed specifically at economics but can be applied equally well to rational choice theory. In the subjects studied by social scientists there just happen to be very few, if any, probabilistic let alone deterministic laws. There are often 'demi-regularities'; imperfect but nevertheless discernible relationships between two or more 'things' (Lawson, 1997: 204). But, Lawson adds, such relationships usually only hold in and for particular times and places. At a first glance, this argument seems quite similar to the one considered in the previous section. There does not appear to be a great deal of difference between arguing that causal laws only hold all other things being equal and that they rarely are equal and arguing that empirical relationships are neither strong nor enduring. There is, however, an important difference between positivists and scientific realists at this point. Positivists regard the problems confronting social scientists as epistemological ones. Positivists believe that empirical laws exist but that they are, for the reasons previously discussed, very difficult to identify. The problem rational choice theorists' face is an epistemological one relating to their knowledge. Scientific realists, on the other hand, regard the problem social scientists face as an ontological one; that is as relating to what exists. They believe that there are no empirical laws out there.

So what should economists (and rational choice theorists) do? Clearly they should not launch themselves into wild goose chases for non-existent laws. Instead, Lawson argues, they should try to explain why 'demi-regularities' which hold at certain times and places do not hold at other apparently similar times and places. To return to the previous example, rational choice theorists should not, in other words, be asking whether ministerial resignations cause leadership contests. This is a question to which there is no meaningful answer. They should instead be asking why resignations sometimes lead to such contests and why at other times they do not. To answer such comparative questions Lawson argues that the mechanisms causing things to happen (or not happen) in particular ways must be identified:

A mechanism is basically a way of acting or working of a structured thing. Bicycles and rockets work in certain ways. Of course they cannot work or act in the ways they do without possessing the power to do so. Mechanisms then exist as causal powers of things . . . the world is composed not only of such 'surface phenomena' as skin spots, puppies turning into dogs, and relatively slow productivity growth in the UK, but also of underlying and governing structures or mechanisms such as are entailed in the workings of, respectively, viruses, genetic codes and the British system of industrial relations. (Lawson, 1997: 21–2)

In such terms rational choice theory might be understood as involving the search for causal mechanisms which can explain the existence of demi-regularities. In this way, Downs' *An Economic Theory of Democracy* might be understood as making a claim about the existence of a particular mechanism, the median voter theorem, which in certain circumstances causes vote-maximizing parties to converge upon the electoral centre-ground. Laver and Shepsle's portfolio-allocation model might, in a similar way, be understood as making a series of substantive claims about the difference one mechanism, ministerial discretion, can make to coalition negotiations. Riker's work on democracy can be interpreted as showing how the mechanisms of agenda control, strategic voting and heresthetics generate political instability. Olson's *The Logic of Collective Action* shows how another mechanism, free riding, can cause the sub-optimal provision of public goods. Finally, and at a more general level, rational choice might be characterized as showing how the mechanism of rational action generates stable equilibrium in various political settings.

Mechanisms cause things to happen in particular ways. But particular mechanisms only cause things to happen in predictable ways when left to operate in isolation. In the social sciences, prediction is extremely difficult because most outcomes are the results of the operation of a number of mechanisms. As a result, Lawson (1997: 23) suggests that social scientists can only say that mechanisms have a 'tendency' to cause things to happen. Does this matter? We have just seen why, for the positivist, it matters a great deal. Under the terms of the symmetry thesis, a theory's failure to predict casts into doubt its explanatory value. But scientific realists regard the inability to predict as being less significant. They argue that it is perfectly possible to predict without being able to explain and to explain without being able to predict. As an example of prediction without explanation assume that the declaration of war on a country is *always* preceded by the withdrawal of the ambassador from that country. The withdrawal of the ambassador can then be used to predict the declaration of war but does not help explain it. As an example of explanation without prediction, consider evolutionary theory. Evolution explains how particular and highly specialized animals (including *Homo Sapiens*) developed from a succession of less specialized ones by way of a mechanism, natural selection, which results in the survival of the fittest. Yet it is a 'cliché among philosophers and historians of science' (McCloskey, 1986: 36) that evolutionary theory cannot be used to predict how species might adapt and evolve in the future (although see Rosenberg, 1992: 44–7, and Sober, 1984: 136–47). Green and Shapiro (1994) claim that rational choice has a poor predictive record. To their argument we can now offer another riposte. Scientific realism shows theories can be used to explain even if they cannot predict. Rational choice can be conceived of as an exercise in scientific realism. We cannot therefore conclude that rational choice is unable to explain because it cannot be used to predict.

Interpretivism, understanding and reasons

The interpretative or, as it is sometimes known, hermeneutic approach, was developed during the eighteenth century by the German philosopher and pastor Friedrich Schleiermacher (1768–1834) as a method of reading classical texts (Boylan and O'Gorman, 1995: 53). Schleiermacher argues that correctly interpreting texts, whether the Bible, a work of literature or a business letter, is a difficult process. An

'interpreter' must not only understand a text's linguistic meaning and historical context, but the author's intentions in writing a particular sentence or passage. Schleiermacher's arguments were developed and first applied to the study of history and the social sciences by Wilhelm Dilthey (1833–1911). Dilthey argues that texts, verbal utterances, art and actions are meaningful expressions and that in order to explain them we need to understand the intentions of the person whose utterances, art and actions they are.

Positivists and scientific realists agree that it is both possible and desirable to study the social sciences using the same methods as natural scientists. They simply disagree about what these methods are. Interpretivists take a contrary position. Natural scientists are interested in and seek to explain what Collingwood (1946) [1996: 168] calls the 'outside' of an event. They are interested in describing the behaviour of atoms and discovering the laws which can be used to explain such behaviour. Social scientists study human action and interpretivists argue that explanations of those actions require us to understand both the 'outside' and the 'inside' of an event. A social scientist who is attempting to explain party competition must not only describe the behaviour of party leaders (the outside of the event) but also identify the reasons which led those leaders to act in particular ways (the inside of the event) in terms of their beliefs and desires:

To explain the motion of molecules, the fusion or fission of atoms, the paths of celestial bodies, the growth or mutation of organic matter, etc., the [natural] scientist will not ask why the molecules want to move about, why atoms decide to merge or split, why Venus has chosen her particular orbit, [or] why certain cells are anxious to divide. The social scientist, however, is not doing his job unless he explains changes in the circulation of money by going back to the decisions of spenders and hoarders, explains company mergers by the goals that might have persuaded management and boards of corporate bodies to take such actions, explains the location of industries by calculations of such things as transportation costs and wage differentials, and economic growth by propensities to save, to invest, to innovate, to procreate or prevent procreation and so on. (Machlup, 1961 [1996]: 9)

Interpretivism is routinely presented as offering an alternative and contrasting method of explanation to that employed by economists and rational choice theorists (Hampsher-Monk, 1991). In the rest of

this chapter I want to suggest that the relationship between these two is however more nuanced.

Rational choice is committed to constructing explanations which assume that people are instrumentally rational. In Chapter 8 I showed how the concept of instrumental rationality might be defined and defended in terms of either the 'axiomatic' or 'optimizing' approaches. The axiomatic approach maintains that a person is rational if they have a reflexive, complete, transitive and continuous preference-ordering and if their actions can be understood as maximizing their utility. Such an approach is indeed inconsistent with the demands of interpretivism. For a rational choice theorist using the axiomatic approach need not make any claims about what is going on inside actors' minds. To use Collingwood's distinction, the use of the axiomatic approach commits rational choice theorists to looking at the 'outside' of an event: that is at people's behaviour rather than the reasons or motives which led them to act in a particular way.

I argued in Chapter 8 that instrumental rationality might also be characterized in terms of a person's possession of an optimal set of beliefs and their selection of those actions which can best realize their desires given those beliefs. The important point to note in this regard is that rational choice explanations which use the optimizing approach must, if they are to be successful, rest upon an accurate (although not necessarily exhaustive) account of the beliefs and desires which actually led a person to act in a particular way. Assume that we want to explain why somebody gave up smoking. We might argue that they did so because they wanted to live to a ripe old age and believed that smoking would eventually kill them. This looks like a good explanation because it is not hard to see why the belief that smoking can kill might be an optimal one to possess, and why someone who believed it and wanted to live until an old age might choose to quit. But no matter how plausible it may appear, the explanation will obviously not be a satisfactory one if the person actually quit smoking because they wanted to save money and believed that smoking was costing them too much. What follows from this? If rational choice theorists make use of the optimizing approach then they must identify those beliefs and desires which actually led people to act in particular ways and must therefore use the interpretive method.

In trying to identify the beliefs and desires which led actors to act in a particular way, rational choice theorists must, however, confront a significant practical problem. It may not always be possible to identify an actor's beliefs and desires. Assume that some dastardly cynic

explains the decision of a particular politician to cut taxes in terms of the proximity of a forthcoming election. Assume that there is plenty of evidence to show that, in general, taxes are indeed significantly more likely to be cut before an election. Once presented as a probabilistic law to the effect that 'when X (an election is looming) then usually Y (taxes are cut), do we now have a satisfactory explanation of why our politician cut taxes? The positivist would argue that we do. I have already argued that we may not. For we still need to identify the beliefs and desires which led the politician to cut taxes. Now at this point we could of course simply impute a set of plausible-sounding beliefs and desires to the politician. We could say that they cut taxes because they wanted to be re-elected and because they believed that they could increase their vote by cutting taxes. But if our explanation is to be an effective one we must identify not simply the beliefs and desires the politician might have had, but the beliefs and desires they actually had, and the problem here is that there are any number of possible beliefs and desires the politician might have had which will be consistent with the action they took. So we cannot rely upon empirical evidence alone to tell us what a person's beliefs and desires are.

How can we get around this? The interpretivist does not see a problem here. Whilst recognizing that we cannot see inside people's minds, they argue that we have open to us the 'devastatingly simple expedient of listening to or reading what actors aver in speech or writing about these matters' in order to find out what a person's beliefs and desires are (Hampsher-Monk, 1991: 61). Yet in this *particular* case and for what I take to be fairly obvious reasons, this is problematic. In their speeches, interviews and even private diaries and correspondence, politicians are likely to maintain that they cut taxes because they believed that doing so was in the national interest and are likely to do so whether or not this is the truth of the matter. So should we accept such assurances and reject the alternative and more cynical explanation? It seems to me fairly obvious that we should not because in this case we have a good reason to suspect that the politician may not be telling the truth. It is at this point that rational choice and interpretivism make uneasy partners. Politicians and other political actors will not always have self-interested reasons to try and conceal their true beliefs and desires. It ought, for example, be possible to test Laver and Shepsle's portfolio-allocation model not only by looking at its empirical predictions but by asking politicians why they formed particular coalitions. There is, in other words, room within rational choice theory for qualitative as well as quantitative research. Yet in many cases, and

given that self-interest is the default assumption, rational choice theorists may find it extremely difficult to identify actors' beliefs and desires.

In assessing the relationship between interpretivism and rational choice I want to make one final point. If instrumental rationality is understood in terms of the optimizing approach, interpretivism is a necessary part of rational choice explanation. But it ought also to be emphasized that there is much more to rational choice explanation than interpretivism. As I have already noted, interpretivism was developed as a way of reading and understanding classical texts written by either a single author or a small number of authors. As it is currently practised within the history of political thought, the subject area on which interpretivism has perhaps had the greatest impact, the task facing the interpretivist usually remains one of discerning the intentions of a single author (see Tully, 1998; Skinner, 2002). I do not mean to suggest for one second that this is an easy task. Rational choice theorists must, however, routinely attempt to explain the interactions of a large number of actors and from this I think two points follow.

The first is that rational choice theory needs to explain not only why people acted in particular ways, but why and how those actions led to perhaps unanticipated outcomes. Such explanations cannot consist solely of an account of an actor's beliefs and desires. Consider the following example offered by Thomas Schelling (1978) (also see Rosenberg, 1995: 157–9) of how racial segregation might arise within a city even though nobody wants this to happen. Assume that a city is like a 'grid' composed of a series of squares. Each square (with the exception of those on the borders) will be in contact with eight other neighbouring squares. Assume that there are two sets of inhabitants, noughts and crosses. Assume that these two groups are randomly allocated to spaces and, once this allocation has been completed, that there are still a number of empty squares. Assume *nobody* wants to live in a square in which their only neighbours are members of the same group. Assume finally that everyone wants to live in a square in which at least one-third of their neighbours belong to the same group and that they will move to an empty square if this condition is not satisfied. Schelling then shows that for almost every possible initial distribution, (i) at least one person will want to move, (ii) that each such move is likely to lead someone else to want to move, and (iii) that the result of this process is likely to be segregation.

To see the dynamics at work here, consider the situation indicated in Figure 9.1. There are five rows (A–E), five columns (1–5) and, in total,

Figure 9.1 *The dynamics of segregation*

	1	2	3	4	5
A	-	-	-	X	X
B	-	O	O	-	-
C	-	O	X	O	-
D	-	X	O	X	O
E	X	-	O	-	X

25 squares. 13 of which are occupied. Consider first the position of the X occupying D4. They have 6 neighbours of whom 2 (C3 and E5) are also Xs. They will therefore not want to move. The X occupying C3 has 7 neighbours, 2 of whom (D2 and D4) are Xs. Because less than one-third of their neighbours are from the same group they will therefore want to move. Say they move to the vacant square at A3. The X occupying D4 now has 5 neighbours, only one of whom (E5) belongs to the same group. So they will now move. Played-out on a larger scale, it is not hard to see how this process might, over time, lead to segregation even if nobody wants to live in a segregated city.

Is this a good explanation of why segregation occurred in so many American cities in the 1950s and 1960s? By itself, it is not. I have argued that we may need to substantiate any such explanation in terms of the beliefs and desires people actually had. What it does show, however, is that outcomes can be the result of individuals' actions and the unanticipated consequences of their interactions. One of the reasons why game theory (Box 5.2) offers political scientists such a useful analytical tool is that it can show how and why individual actions can generate unexpected and, in the case of the prisoner's dilemma game, unattractive outcomes.

The second point to make here is that rational choice explanations will necessarily be of a rough and ready sort. Ideally they will be founded upon completely accurate and exhaustive accounts of actors' beliefs and desires, but this ideal simply cannot always be realized. So,

in practice, rational choice explanations are founded upon obviously stylized sketches of actors' beliefs and desires. It is perfectly legitimate to compare these explanations in terms of the accuracy of their sketches and perfectly possible to criticize any one explanation as offering an inaccurate or incomplete account of an actor's beliefs and desires. But in doing so we ought to exercise caution. It is not reasonable to hold rational choice explanations of outcomes involving the actions and interactions of a large number of people to the same standards we hold attempts to explain individual actions. For the application of such standards would often make the explanation of political outcomes and events a practical impossibility. Rational choice ought to be judged, but it ought not to be judged unfairly.

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