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PRINCIPLES OF POLITICS:
A RATIONAL CHOICE THEORY GUIDE TO POLITICS AND SOCIAL WELFARE

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ABSTRACT:

Claims of knowledge and of ‘principles’ regarding political matters, both empirical and moral, have been made over the millennia but never without contention. This book is about some of the empirical and moral generalizations arrived at in what might be called the new political science. The book deals with the findings directly, and how one goes about justifying such claims. It reveals how the quality of the justification determines the quality of the claims. The principle foundations used to develop the arguments or justification are those of rational choice and social justice theories. But given the diversity of claims within the well reasoned philosophical traditions, we need more than reason to establish (or for that matter, except in cases of contradiction, disestablish) claims of knowledge about politics. Empirical findings, especially from experiments, are brought in to evaluate the validity of the claims. The principles discussed improve our understanding of concepts such as social welfare, collective action, altruism, other-regardingness, distributive justice, group interest, and more. The methods employed help us understand what is universal to all of politics. This volume zeros in on these universals with an eye to both the empirical problems of political behavior and some of the normative conundrums such as what constitutes social justice. It identifies some of the main candidates for principles in both categories, and helps the reader to understand how to justify any such candidate.

a. A few persons have given this essay a very careful read and made some serious criticism. Their efforts have much to do with any of the quality of this essay. For this I thank.

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PREFACE

Politics is the subject of this volume. I think of politics as those activities and behaviors associated with a group reaching ‘collective decisions’ and with individuals undertaking ‘collective actions.’ The origin of politics may never be established. Some might believe it comes from our having fallen from grace by eating the forbidden fruit in the Garden of Eden. My perspective leads to more empirical responses. Politics arises because groups of people have to do things together to achieve shared goals such as building a bridge, or under some circumstances, even survive. There are things that we can not achieve when we remain “unorganized.” This is especially so when groups of individuals share a desire for something costly that they would accomplish as a group. Examples abound but include such things as roads, environmental protection, law and order. In the social sciences these are known as ‘public goods.’

To accomplish the objectives of securing public goods, leaders are selected, and rewarded, taxes are demanded, and political competition arises. Often, however, these are the very activities that get in the way and actually *prevent* groups from getting things done in their own interest. This book will try to explain why these sorts of contradictions occur: why politics is necessary, but so often dysfunctional. Indeed, politics is often so nasty that some become anarchists and argue that politics can’t possibly be justified by the welfare needs of the group members.

For most of recorded history it was held that citizens were to support the welfare of the rulers. In this book such an ethical justification of politics and its hierarchies is reversed (as it has been by most political theorists since Thomas Hobbes’ Leviathan (1651). Democracies are predicated on the notion that the political is justified by the welfare of the citizens. Most noticeably this is asserted and enshrined in the Declaration of Independence: First it claims that “all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are life, liberty and the pursuit of happiness.” Then politics, or more specifically government, is argued to be related to these rights, which include happiness: “That to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed.”

One concern of this volume is to identify and explain the empirical and normative principles implied by this simple perspective on politics. Such normative principles aren’t a call to action. In medicine, it is not enough to say we want people to be healthy. We must understand disease. To control flooding rivers, we must understand hydraulics. To design political institutions that support the welfare of individuals we must understand how individuals behave and how institutions work: we must understand the patterns that are inherent in politics. So the second, and indeed, primary, aim of this book is to give the reader an understanding of, and that means an explanation for, the deep patterns of politics. To illustrate, these include the universal emergence of monopolistic governments, the omnipresent wealth of political leaders, the difficulty of holding political leaders accountable and more.

To understand the patterns of politics in a group, we build on understanding the behavior of individuals in the group.¹ Much of the modern explanations of the twists and turns that make up the purposive behavior of individuals is premised on a relatively intuitive idea: When people choose,

1. This methodological presumption is often called ‘methodological individualism.’

their choices reflect their values and their constraints. Leverage over this behavior is often obtained through the logic of rational choice theory. It is perhaps counter-intuitive that such a simple starting point can shine a powerful light on our understanding of the behaviors of governments, non-governmental political organizations, and individuals. But as the reader will discover, it is so.

Indeed, the findings based on these theories are sufficiently broad to be of concern to many politically active citizens of the world. Although the main audience for this book are advanced undergraduates and graduate students of political science and political economy, I hope the explanations are sufficiently clear to be available to the interested and curious adult. Here I present the field's major substantive conclusions, with some of their important and controversial implications. I also hope to touch upon some of the research frontiers, and transmit a feel for the logic of the arguments. Since the theoretical arguments are often mathematical, and I do not wish the formalisms to get in the way of the substance, when they are needed, I put much of those (simplified) arguments in 'side bars' and present the arguments less technically in the main text.²

Not all of the foundations of this 'new' political science is recent. Rational choice theory has been around for a long time (certainly since Adam Smith's 18th century foray onto the philosophical stage). But until recently, only economists used the theory. Perhaps the 19th century division of the social sciences into their modern Anglo-Saxon 'departmental' identities led to these divergences. Economists focused narrowly on markets, and political scientists on governments. Although the disciplines grew apart, shortly before WWII economists were developing theoretical conclusions that once again made the partial fusion of the fields somewhat possible.³

But the major expansion of the theory of this new 'political economy' grew out of the post WWII effort of a few economists to cover non-market events. Subsequently, their models ran into some difficulties and helped spawn a new branch of inquiry: experimental economics. The rich crop we are currently reaping was sown by a few major characters most of whom established a number of what are now standard sub-disciplines within economics and the social sciences. The sub-fields include public finance (and the theory of public goods developed by Paul Samuelson, Economics Nobel laureate in 1970; game theory (begun by John von Neumann, but given a radical twist by John Nash, Economics Nobel laureate in 1994), experimental economics (begun by Vernon Smith, who was the Economics Laureate in 2002) and Charles Plott), social choice theory (invented almost whole cloth by Kenneth Arrow (who was the Economics Nobel laureate in 1972) and Duncan Black), and public choice theory (Mancur Olson, James Buchanan (who was the Economics Nobel laureate in 1986), Anthony Downs, and Gordon Tullock).

Their insights, founded on a theory of selfish choosing, led to empirical anomalies. As such, researchers became concerned with how individuals' feelings toward others (loyalty, fairness, doing the right thing) might be balanced with economists' standard fare: the assumption of self-interest. Such an expansion meant that some of the conclusions needed to take into account what individuals

2. I discuss in the Introduction why the adherence to justification of one's conclusions is important. This 'method' of argument is one of the main elements in the powerful growth of claimed knowledge. Why this 'works' to expand knowledge is discussed in the Introduction.

3. Some of the earliest modern forays of these modern economists into political studies include Smithies (1929) and Hotelling (1941). They noted that rational choice could explain aspects of political competition. They saw politicians as picking a point in political space to attract voters much as shop owners choose to place a store in a town to pick up customers. Then von Neuman (1944) developed a theory (of 'games') to explain, among other things, coalition formation and strategic behavior - a topic of general concern to political scientists.

thought to be fair, right, and just. Thus, some other major threads of the new political economy butt up against fields such as philosophy. There theories of fairness and justice developed by John Rawls, Amartya Sen (Economics Nobel laureate in 1998), and others added immeasurably to the mix. Psychologists also got involved by considering how well rational choice theory fit into the observations they had made regarding personal choices. Notions both of bounded rationality developed by Herbert Simon (a political scientist and Economics Nobel laureate in 1978) and of prospect theory developed by Daniel Kahneman (Economics Nobel laureate, 2002) and Amos Tversky (psychologists) also added to the understandings. Since many of the choices we make involve gambles and risk, there are the fundamental insights of those who worked on probability theory over the last few hundred years: individuals such as von Neumann and Thomas Bayes (the 18th century English mathematician and Presbyterian minister).⁴ Finally, political scientists have also worked on these threads to weave a wide tapestry covering parts of all the traditional sub-fields of political science (for examples, see Riker, 1962 and 1982; Boix, 2003; Fearon, 1995 and 1998; Tsebelis, 2002; Lohmann, 1994 and 2000; Weingast, 1997; Miller, 1990; Shepsle and Bonchek, 1997 - many of whose contributions will be discussed in this volume).

These multiple strands lead to a completely new, theoretically coherent, empirically powerful approach to the analysis of political events. The analysis is of relevance to anyone trying to make sense of politics: journalists, campaign advisors and other political strategists, citizens, and academicians. With these theoretical developments political science has been set on a faster track: one in which the field is regularly finding new discoveries and generalities relevant to old puzzles.

OVERVIEW OF THE BOOK

Claims of new knowledge (both empirical and moral) regarding politics, have been made over the millennia. The new era finds not only that the pace has picked up, but also that the consensus on research methods has at least partially resolved some of the old contentious debates. Progress has been made by requiring both logical justification for one's theoretical conclusions or propositions, and careful testing of the conclusions with data from experiments and historical (or field) events and data.

The book is organized around the new conjectures and law-like propositions that have been made about politics and justified on the basis of the theories of rational choice and social justice. These assertions are collected together and tabulated in a table of propositions and Corollaries. These propositions are of three sorts, and are differentiated by their type style in the text. All of them are offset in the text, with the major claims in **BOLD SMALL CAPS**. Secondary implications or corollaries of these principles are distinguished by being shown in SMALL CAPS but not bold. Finally, as already mentioned, a few of the generalizations are normative and concern traditional topics of political philosophy. These are distinguished by being shown in *bold italicized* with the derivative claims being merely *italicized*.

Although I make an effort to distinguish between those claims that have a normative basis, and those that are empirical, the membrane is not impermeable. Some of the universal claims that may appear to be normative have to do with conjectures of universal *empirical* characteristics of moral judgements. Such claims, though with moral implications, are *not* listed as normative conjectures.

4. He had the bright idea that people update their beliefs on the basis of evidence, and hence the fit of one's beliefs with the 'world' are likely to improve.

So to cite an example, let us say that we are considering a definition of fairness, and someone says ‘to understand what is fair, you must reason impartially.’ That is a normative claim (there can be other suggested bases for arriving at a fair choice). But if when reasoning impartially, all individuals come to a particular conclusion, that conclusion is not normative. It would however, reflect conditional normative weight from the asserted relation of fairness and impartial reasoning.

The book is divided into 4 separate Parts and a substantive Introduction. Although experimental findings are discussed somewhat throughout, in a few chapters a separate section discusses evidence and questions that have been raised about the central propositions in the chapter, and identifies some of the research frontiers that these imply. These sections are referred to as Research Frontiers: Experiments, Doubts, and Ways Forward. Suggestions for further reading are included at the end of each part.

So that the reader can understand the basis for the assertions, both evidence and reasoning is discussed. More technical aspects of how the claims are justified is usually limited but sometimes sketched in sidebars. Although I discuss the quality of the justifications and claims, the reader should keep in mind (with due deference to Descartes) that reason is insufficient grounds for the establishment, or, except by contradiction, the disestablishment, of claims of knowledge. Although our understanding of how to judge theories, conjectures, and knowledge is still incomplete, we humans have learned a great deal about how best to establish, and falsify, claims of knowledge.

Even if they remain incomplete, current standards of epistemology help us understand what are to count as claims of knowledge and as candidates for universal principles. These standards also yield up guidelines for empirical methods, which, in conjunction with reason, are required to establish our understanding of scientific principles, whether of motion, energy, mass, economics or politics. Scientific methods have also been useful in improving our understanding of a very wide range of human behavior and institutions: markets, altruism, other-regardingness, distributive justice, moral points of view, and the like. These methods can thus help us understand what if anything is universal in the way of behavior and principles. This volume discusses all this from a somewhat gentle pedagogic point of view: one open to students in classes and general readers interested in learning about the subject. The reader will find the volume is oriented around the following questions: What practical questions can we now find answers for? How do we justify our conclusions?

The Introduction has two goals, both of which are fundamental: First, it establishes a common understanding for readers as to what is meant by knowledge and similar methodological matters, and second, it sets up the basic elements of the theory of rational choice. The volume then is organized in terms of the substance of politics. The book is meant to be a complete guide neither to the understanding of rational choice theory nor to politics. Rather, I introduce elements of the theory of rational choice as needed to explain major regularities in politics.

Part I considers how we decide whether or not to engage in collective action, and the implications of these findings. The implications of the theory of collective action will branch off into topics such as voter behavior, information acquisition by the citizenry of democracies as well as some policy and institutional design issues.

But collective action is often premised on the collective, or group, coming to a decision or choice, for itself. Group decision making becomes the subject of Part II and is again central to Part IV. In Part II we pick up the notion, introduced by Hotelling and Smithies (see footnote 3) that in democracies much political decision making is determined by political competition. We use their

insights to think of the arena of political competition as a ‘space.’ So doing helps us form expectations about collective choice. Some of these implications inform us regarding institutional design. Others force us to consider problems of achieving the goals of collective choice. Presumably the goals of politics (if not politicians) include something like the satisfying of citizens’ needs. The implications of spatial models for these questions are the topic of Part II. But the topic is far larger than these spatial models can accommodate and are raised again in Part IV of the volume.

Other aspects of understanding how political institutions relate to the needs of citizens go beyond spatial matters. How politics and the structures of governments both help and hinder us in the achievement of getting what we want, is much of what we consider in Part III. There we consider why political ‘deals’ and ‘bargains’ often take the form they do and how these can predictably affect the stability of governments, political systems, and regimes.

All this analysis is related to satisfying the collective desires of citizens. It is one thing to talk of the needs of individuals but how are we to understand collective needs and desires? We explore these questions in Part IV. Only after coming to grips with this can we fully explore the relation between institutional design and the possibility of satisfying those needs. Once we are in the throes of such questions as “what constitutes the needs of the people,” we must consider the problem of social welfare more fully. Here we examine the more general topic of social choice and its relationship to social welfare. Such concerns bring us to concerns of political philosophy and what we want from government. This leads us to examine the substantive notions behind social welfare. Are there general goals of democracies? And if so, how can specific institutional arrangements affect the achievement of social goals? These are the sorts of problems we approach as some of the major implications of the theory for democratic governance. It would be nice if what we want were related to what we can expect from government. Such a perspective allows us to evaluate the differences in performance between democratic regimes. Do different democratic structures generate differential performance of democratic governments for their populace?

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INTRODUCTION: POLITICS, UNIVERSALS, KNOWLEDGE CLAIMS, AND METHODS

Presumably you are reading this book to gain insight into politics. Politics, means different things to different people. For some it is an electoral fight for city hall. For others it is the legislative struggle to change a law. In non-democratic countries it may be the struggle of an autocrat to maintain power, or of citizens to organize a rebellion. Still others may view it as the bureaucratic hassle of getting a business license. For our purposes these are all politics. Politics consists of behavior undertaken to make centralized decisions for a group, or to secure interests shared by some members of a group.

This book makes claims – big claims, about enduring patterns to be found in politics. Hopefully, these patterns will help you to understand why certain things happen, and even how you can make some things happen. The book can not give us a complete understanding of politics: nothing holistic. But we can explain why certain problems, certain patterns, occur over and over again. Barring a few insights, these are not things I have discovered. Rather, a substantial group of scholars has expanded the theories of rational choice and developed conjectures concerning many aspects of politics. They, along with a skilled, and often skeptical, bunch of others have tested these conjectures. In this volume, I present generalizations about politics that are justified by a chain of reasoning and that have survived some serious testing. These generalizations amount to claims of knowledge regarding both empirical and normative political questions. Knowledge claims have been made by other political theorists over the millennia, never without contention. Contention continues. So before we begin our exploration of these knowledge claims, let us consider the ground rules.

You will want to know how to evaluate the assertions: how to distinguish wheat from chaff. How *does* one establish or falsify a claim of knowledge - about politics, or anything else? How do our methods of inquiry affect both the quality and the enduring survival of what we claim to know? Lest you consider these idle concerns, notice that this book is being written after the fruits of science have cured diseases, wired every home, recorded all entertainment, and made remote control warfare a thing of joysticks forever. It is also at a time when some Americans attempt to reject the scientific findings of evolution and push for the teaching of intelligent design in our schools. Such attacks on science make the task of reasserting and following justified methods to insure the quality of our judgements a matter that is related to the actual survival of civilization as we know it.⁵

Reason alone is insufficient for deciding disputes regarding empirical truths. Reason yields insufficient grounds to adjudicate empirical claims unless it lets one demonstrate logical error, and hence show that an argument said to justify a conclusion just doesn't. For eons, philosophers felt that they could use reason to understand and identify the truth of both normative and empirical claims. So Aristotle was sure that women had fewer teeth than men, and he and others argued that it could be shown that slavery was just. Universal claims have been made in these ways, and such claims are still studied by weary scholars. But the disutility and lack of viability of such claims

5. But do not read into this a presumption that we can establish a 'method' of science and corroboration. Such a recipe for obtaining sure knowledge is beyond us. At best we can accept some aspects of methods as helpful and reject others as dysfunctional. The search for these methods is the continuing holy grail of the philosophy of science: see the volume edited by Nola and Sankey (2000), or Giere (1988) for illustrative overviews.

usually insure that they are museum pieces: not useful bits of knowledge. Empirical methods, *in conjunction with reason*, have, on the other hand, helped us understand such principles as those of motion, energy, mass, evolution, and justice.

Empirical methods in the form of experimental and statistical methods, are widely understood in both the academy and the lay public, and won't be belabored by me. What is less widely appreciated outside the 'sciences' is the role of logic in the processes and the progress of science's assertion of knowledge. And to understand that, it is useful to have a short segue to get a glimpse into 'What is knowledge.'

KNOWLEDGE

What *is* knowledge? The uninitiated reader may roll her eyes at this point. Why step into such a quagmire as a prelude to understanding politics? After all, isn't this just another unresolvable, difficult question? Why not let philosophers battle this one out? Surprisingly, there is considerable consensus in philosophical quarters as to knowledge's basic properties.⁶ And as we shall see, understanding what knowledge *is* helps us know what we are looking for as we search for knowledge about politics. It helps us unpack why the foundations of rational choice theory are so complex. And why such complexities are needed to understand what politics *is* and how it works.

Let's dive in. What does it mean to assert, 'I know my hat is on the kitchen table'? Philosophers and others who have examined this agree that if I assert that "I *know* my hat is on the kitchen table," then for it to be a true assertion, my assertion must have three properties.

First, I must *believe* that "my hat is on the kitchen table." If I don't believe it, how could I assert that I *know* it? For example, if I actually believed the hat to be in the hall closet but asserted, "I know my hat is on the kitchen table," we wouldn't say that my assertion ("I know my hat is on the kitchen table") was true, even though the factual component regarding the whereabouts of my hat may (or may not) be accurate. I must believe what I assert to know.

Second, what I believe must be *true*. Assume I do *believe* the hat *is* on the kitchen table. What if it is actually in the closet? Certainly we wouldn't want to say that "I know my hat is on the kitchen table" is true.⁷ I may believe it, but I wouldn't know it.

6. A quick check of this in Wikipedia or at <http://www.epistemelinks.com/Main/MainEncy.aspx> should convince the sceptic and provide some understanding of the range of debate on the subject.

7. Implicit in my illustration is an acceptance of a popular theory of 'truth:' the correspondence theory of truth. Theories of truth are given an accessible treatment in White (1970). And the two major theories, Correspondence and Coherence, are well described in White (1967) and Prior (1970) respectively. But standard accounts can also be easily found at <http://plato.stanford.edu>, the major online philosophy encyclopedia. In correspondence theory, the truth of a statement ("My hat is on the table.") is dependent upon the conditions in the real world: is my hat *really* on the table? If so, then the statement is true: it corresponds with the real world. If not, *tant pis*. Although this is the 'standard' theory many of our claims of knowledge are not backed by simple observations of the real world and often they go beyond what we can directly observe (think of such cases as string theory, quantum mechanics, and preferences). Partly driven by the lack of direct observation, alternative theories of truth have flourished. The major alternative is known as the 'coherence' theory of truth. It insists that our knowledge claims 'fit' together to make or maintain a coherent pattern or fabric. Disputes then entail as to what precisely is to be the role of the existing claims regarding the empirical world in the determination of 'truth' regarding new claims (see White, 1967). But virtually all conceptions of the empirical science use some conception of the 'correspondence' theory as part of their methodology. Just as tires must grip the road, the

(continued...)

And finally, my belief must be *justified*. For example, imagine that I believe it is on the table but my belief stems from a card in a computer game that said “Your hat is on the kitchen table.” If this were the basis for my belief, we would object “a computer game card is not a viable justification for the empirical belief concerning the placement of my hat.” Even if the hat were to end up being on the kitchen table, we wouldn’t endorse that I *knew* it if the only basis I had for my claim was the game card. In other words: true belief is insufficient to claim knowledge. The quality or strength of the justification is an essential element.

Definition - <i>Knowledge</i>: Justified, true belief.

How then do we justify claims of knowledge? To say a claim is justified means that some argument has been put forward to justify the claim. Justification is comprised of the grounds we use to make our claim. We can get this via an argument (or deduction), as contrasted with justification via observation (or induction). Justification via an argument requires that some premises *imply* the conclusions (i.e. the thing we claim we know).

For such a justification to be valid, we would want to know two things about the premises. First, are they true? And second, does the claim follow as a valid conclusion from the premises (is the reasoning correct?). In other words, if the premises were true, the conclusion would *have to be*. In part, that is what was wrong with the assertion based on the card drawn in the game. It could be true that the card said that my hat was on the kitchen table, but that certainly doesn’t insure that my hat would be there! If the argument justifies the conclusion, then *if* the premises are true, the conclusion *must* be. Such a relationship between one’s claim and its justification a logical one: it is the relationship of logical deduction.⁸ Let us examine why these two elements are important, and yet, why both of these aspects of justification raise problems.

THE STATUS OF THE PREMISES: TRUTH

Consider the truth of the premises. In most scientific arguments the premises include vast generalizations about, for example, motion, or cells, or carbon molecules. Such claims are both necessary and problematic: the generalizations cover many observations, but we can’t be sure they hold for the entire hypothesized class. In other words, they are always questionable. Further, some generalizations are known to be only approximations of the realities that we observe. Take for example, a Newtonian model that allows us to predict a ball’s velocity at the end of a roll on an inclined plane. It usually yields wrong predictions! Unaccounted for factors are said to cause the predictions to be inaccurate. ‘Bridge principles,’ such as those dealing with air resistance and friction are added to explain the deviation from the predicted results. More to the point, generalizations are often simplifications: fruitful in helping to develop theory but only approximations. “Firms attempt to maximize profits,” is a good example from economics. In much of what follows, the major premises of rational choice theory that are employed are also mere approximations. Sometimes we might settle for such approximations as useful for the logical inferences they permit. Other times, we will find that small tinkering will generate more useful inferences and models.

7. (...continued)
claims of science must grip reality.

8. That would make our claim the conclusion of a valid argument. When based on true premises such an argument is referred to as ‘sound.’

Ideally, the premises in arguments are true: the conclusions of sound arguments are then knowledge. But in reality, we can rarely be sure of the truth of the premises. And often the premises in the arguments are only pretty good approximations. The conclusions, as in all science, aren't strictly knowledge, but rather only good candidates for knowledge, or "knowledge claims."⁹ Although therefore in the end, scientific progress and claims rest on judgments rather than absolutes, this is the best we can do. To understand why the methods are still powerful, we need to examine the other aspect of justification: the relation between an argument and its conclusions. Such an examination helps illuminate why this style and method of argument have led to progress in so many of the empirical sciences, including, recently, political science.

THE RELATIONSHIP OF THE PREMISES TO THE KNOWLEDGE CLAIM: LOGICAL INFERENCE

Now let's explore that second property, justified: if the premises are true, the conclusion must be. In other words, logic. Logic requires a particular structure to an argument: for one, it sets down rules as to what you can conclude from any starting point. Most specifically, in a logical argument, if you start with some true point, then by following the rules, all that you can arrive at are other truths. In other words, providing you begin with truthful statements, logic preserves the truth all the way to the conclusion (see Sidebar 1).¹⁰ Here then is some of the power that one gets from logic. Let's say you begin with what you believe to be truthful premises, and a logical argument leads to some 'testable' conclusion.

As an example, say you are a 'strong believer' in the value of the cards from the computer game. You presume that every prediction of the cards from the computer is true. This logically implies that you presume that the card that predicted that my hat was on the kitchen table was true. Now we look in the kitchen, and the hat isn't on the table. Given the power of logic: there was something wrong with at least one of the premises. Indeed both are false: the card's prediction was wrong *and by virtue of the logical link between those premises (and given the facts)* the game cards are NOT always right. Logic gave us the power to construct an *indirect* test of the premises. So logic enables one to construct these tests and allows us to see the relation between theory and test. Indeed, this simple property of logic lies behind the construction of all scientific tests: one tests a conjecture by seeing if something that it logically requires is true. If that is not true the conjecture must be false.

Theories, in the sciences, are premises coupled to logically related conclusions (usually referred to as conjectures¹¹ or hypotheses). These conclusions are often appended to some other premises to allow application of the theory to an empirical problem. In this fashion, scientists may be said to expand the theory by developing a model of an empirical problem. This development of 'models' is a particularly useful move: it increases the range of indirect tests of the theory.¹² If the model and its

9. Although Karl Popper (1959) didn't use the term, he might recognize these as conjectures that have survived repeated tests of falsification.

10. Indeed, logic is *the* set of rules that preserves truth in argument (providing that truth is two-valued). Although mathematics is not the same as logic, there are sufficient family resemblances and ties so that this property is maintained in mathematical arguments.

11. A conjecture would be a testable generalization.

12. One doesn't develop an application of a theory to a new circumstance without the use of auxiliary hypotheses (e.g. regarding friction). Then, the indirect tests are not of the theory alone, but also of these auxiliary hypotheses. (See (continued...))

tests are properly constructed, and the test is negative, something must be wrong with one or more of the premises.

However, this is a simplification. If premises can't be known to be true (and sometimes turn out quite false), the description above has to be more flexible. Judgment enters in.

One might wonder, if the premises are not true, what is to be gained by generating truth-preserving arguments? From false premises, we can't insure anything about the truth of our conclusions. And then the conjectures remain just that, and our knowledge really must be understood to be conjectures: claims of knowledge which are well but not perfectly justified (see Maxwell, 1972).

Theoretical science, along with its procedures and methods, generates two great benefits. First, the theoretical structure and logic facilitate

correctable predictions, and the discovered errors generate questioning that improves our claims of knowledge. These two classes of benefits are quite distinct, but both tie to correctability.

Sidebar 1 – On the Power of Deduction

An argument has a conclusion, or set of conclusions, that are *justified* by a set of premises. What does this mean? It means if the argument is correct, the conclusions follow from the premises. In other words, if the premises are true, the conclusions **MUST** be true. Or, if the conclusions prove to be false, then there was something wrong in the premises. But how do we insure that we have such a relationship?

In the relationship that we are seeking, the deductive argument needs to be correct - or as it is called, valid. This lets us know that *if* the conclusions are false then the premises must be. For example, imagine that I am having an argument with my neighbor John. I claim his dog kept me up by barking; he denies it:

"I saw you come in with your dog last night! You brought him into your apartment - right next to mine. About 10 o'clock the dog started barking and it kept me up all night."

John responds, "My dog can't bark."

"Nonsense," I respond, "all dogs can bark."

Have I established my conclusion that his dog kept me up? My premises could be wrong: John might not have a dog (but he admits to having one); his dog might not have been the one who came in (but John doesn't dispute that). But the notion that "all dogs can bark" is being disputed. Indeed, John's next line could be:

"My dog is a basenji dog, a breed also known as the barkless dog."

That would sink my argument. Knowing that the conclusion was false, he actually shows me why that might have been: one of the premises was a loser: not all dogs can bark. Indeed, his can't.

But unfortunately, my argument was faulty in other ways. It was not quite deductive: I began with premises including: 1) all dogs can bark. 2) John, you have a dog, 3) barks came from your apartment and your dog was home, and concluded 3) your dog barked. But other dogs could have barked, even in his apartment. For example, John's girl friend might have arrived with a second dog, and hers might have been the dog that barked. In other words, the conclusions don't follow from the premises.

Note now that both things had to work: the conclusions must follow from the premises, and the premises must be true.

But the real power of the deductive argument comes from the case where the premises were thought to be true (I believed all dogs can bark) and the conclusion proves false. For then I learn something I didn't know before: I have to revise my premises. In other words, our deduction helps us test our premises.

IMPROVING KNOWLEDGE CLAIMS

12. (...continued)

Hempel, 1965 or Lambert and Brittan, 1970 for a good introductory account of some of these aspects of theory's role in the pursuit of knowledge).

Knowledge claims are all we can ever have from science: knowledge is beyond our grasp. For who really knows when our theoretical scheme will be overturned by a better one that helps account for the anomalies we have had to put aside? But like knowledge, knowledge claims require justification too. The criteria of justification might be made a bit more forgiving, but needn't be substantially different if when we say "I *know*," we understand that "I claim to know." A claim to knowledge may not be required to be true, but it must be thought to be true, and still needs justification (Popper, 1959). But then what is to be gained by this shift?

Using derived conjectures that are believed to be true to examine the world, leads to a recipe for a weeding out of the wrong conjectures and a continual reexamination of our premises. Testing the inferences of our theories and following the clues spurs us to improve the surviving remnants. It helps lead to a growth in both the reliability and the breadth of knowledge claims. In this volume, I develop conjectures of interest about political events justified by the core assumptions of rational choice theory. By having the conclusions 'follow' from the premises, the arguments can help us both understand and explain how the conjectured events come about.

To the extent that we have doubts about the status of the premises, the explanations become more conjectural, and corrigibility is again underscored. But this point of view changes our perspective regarding the benefits of logic. Rather than logic being a simple tool for justification, it becomes an instrument in the task of discovery. By developing inferences from core conjectures to new applications, one uncovers possibilities for both new errors, as well as for new extensions of knowledge claims. A theory is no longer a static 'argument' but rather a developing and improvable approach to understanding the problems of interest to us.

As pointed out above, the core premises of all theories are quite generalized statements. Imperialistically, research scientists advance arguments by projecting them onto the empirical puzzles they see: "the solar system is a 'Newtonian system,' " "collective action problems are 'prisoner dilemma games'¹³, " " and the like. Some of these are better fits than others. But the dialectic that ensues leads to long term refinements in our understanding of the targets (the solar system and the collective action problems) as well as the theories (our understanding of gravity, and our understanding of rational choice). Hemmed in, at least partially, by our insistence on both greater accuracy in predictions, and by a 'more detailed understanding of reality,' we work dialectically, back and forth, between improving the theories, and expanding their reach.

In what follows we explore the applications of rational choice theory (see p. 10) to political behavior and political questions. In doing so, we might at times bemoan the inaccuracy of the assumptions. This will lead us in the two directions indicated: On the one hand, I detail some of the successes in model development, and on the other, I highlight the research agenda implied by the failings of the predictions that have been found. Hopefully, I will be whetting the appetites of both those who wish to understand politics better, and those who wish to search for better explanations: more accurate knowledge claims.

UNIVERSALS, SYNERGY, AND CONTEXT

What sorts of premises are needed to make for an interesting argument about politics? Premises that are useful in scientific explanations are a collection of generalizations, or universalized claims

13. A subject discussed in Chapters 1 & 2.

(e.g. water boils at 100° C; social welfare can't just be the aggregation of separable individual welfare - to be Discussed in Chapter 8) and then some contextual premises that allow one to tie a class of instances to the generalization.

Universality is often misunderstood by social scientists and political theorists. The misunderstanding is helped along by two distinct meanings of universal. First, we think of 'universal' as being an 'accidental generalization.' For example, a 'universal' social observation could mean "generally done by all Parisians" or even "affecting all in London." Second, 'universal' could mean "applicable to all cases." Logically it is via this bold second meaning (that can subsume the first) that the structure of universal claims are tied to scientific progress. For when one says something is applicable to all cases, then the criteria for the falsification of the claim is clearly set out: the claim is falsified by a non-conforming case. Then falsification of the claim has potentially infinite implications. After all the original claim had many more implications than the ones that were used in the trial that showed it was wrong. For example, all crows are black is falsified by the existence of a non-black crow. Simple characterizations of what science is about is often tied to the establishment of 'universal laws' (Hempel, 1965). Their ease of correction (in principle) generates a potential continual development of sub-classes to take care of the more varied classes of 'exceptional' events that one might find. So "all crows are black" might then be changed, after considerable observations, to "non-albino crows are black." Albino exceptions may not prove to be the only ones: i.e. this universal statement might also prove false, but the universal continues to develop sub-classes until a 'better' or more powerful encompassing universalization arises.

The complexity of the world is captured in statements that are universal, but only with clauses that permit the development of more nuanced arguments, so that they do not show up to be obviously false. Indeed, what we want are law-like statements: correctable, presumably true universal claims of knowledge.

Universal laws in the physical world are usually quite complex, and full of conditionals. Take, for example, the common sense notion that water boils when it reaches a specific temperature. What does it take to change the common sense notion to a 'universal law' of some value? Impurities may be found to matter: well water and tap water and salt water are different substances and will behave differently. Adding minerals can impede or facilitate boiling when heating takes place. And altitude matters: at higher altitudes water boils 'more quickly.' But altitude and impurities aren't sufficiently powerful theoretical concepts¹⁴ to give us a lot of leverage.

When altitude is related to the theoretical concept "pressure," we are enabled to combine a number of relations to generate a more general theory of liquids, gases and state changes. Pressure matters: under lower pressure (and this normally occurs at higher altitudes) water (and liquids more generally) boils at lower temperatures. So under some circumstances we could imagine observing water boiling when cooled if the cooling was accompanied by a sufficient lowering of pressure. And water held under sufficiently increasing pressure may not boil when normally heated. Indeed, boiling has to do with the pressure exerted by the vapor of the liquid becoming greater than the pressure exerted on the liquid's surface. The pressure of the vapor in the liquid is increased by the

14. There is some dispute as to what constitutes a useful theoretical concept. But certainly it has to do with its utility in other accepted generalizations. Altitude is related to boiling in cooking, but not to many other empirical problems.

addition of heat.¹⁵ The utility of the ‘law like statement’ becomes apparent once we have the universal relationship. For example, we can make inferences that were not apparent without it, and construct new realities through technology. With this law-like statement, we were able to manipulate pressure and temperature so as to boil water at a higher temperature in steam engines, espresso machines and pressure cookers.

Conditional clauses, theoretical concepts, and restrictions of precision are needed to transform even the simplest common sense notions into the laws of the physical sciences. The same will certainly be so in social and moral inquiry. Take for example the strong universal statement at the base of some economic reasoning: “people are self-interested.” What does it take to change this to a law-like statement: a universal claim that is presumably true, and empirically testable? Just as in the case of water, we may want to be careful regarding what is the subject or the domain of the claim; ‘what is water’ here gives way to ‘what are people.’ Is the claim to include those people who are deranged? Perhaps we would want to be careful to exclude such cases. But also, somewhere, as we needed to clarify boiling, we need to clarify self-interest. And as we need to relate our clarified notion of boiling to theoretical concepts, so must we tie self-interest to broader theoretical concepts. Some might argue all behavior that appears altruistic is actually motivated by self-interest - after all, didn’t the person *choose* to behave that way for a reason that they valued? So to parse the question further, we need a careful delineation of self-interest. Further, circumstances matter. What do we mean when we claim that someone is self-interested? Is it that all her behavior is self-interested? Or are we restricting our concern to only her decisions? Then, are we saying all her decisions are self-interested or that she is usually self-interested but at other times not?

So we might wish to specify some circumstances but once we do that, there could well be problems of universality. Suppose we note that mothers are less self-interested with regard to their children than with regard to their grocers. Probably true, but to bring grocers into the discussion we give up some generalizable qualities. Our statement is still universal but it is now suspect: grocer is a suggestive category but it appears too restrictive. Not only do we start claiming differences rather than universality but grocers are part of a modern culture: for example, they didn’t exist in small agricultural societies. What are we saying about other times and places? And as in boiling and heat and pressure, how would we tie children and grocers into a category that allows us to derive interesting propositions? How does this tie to what we want from these universals?

I said that the premises must contain ties that bind the instances to the generalizations. What does this mean, more precisely? To create a tie, the predicates (or descriptors) that are used in the generalizations must be connected to each other and to the contextual instantiations. So for example, if we are trying to explain why Toby (our pet) frequently sidles up to his mother, using these premises, it is useful to know that Toby is not a young fish, but rather a young puppy. And somewhere, we would want to include that mother mammals suckle their young, and dogs are mammals. The notion that dogs are suckled by their mothers yields a powerful link to the behavior of Toby. Let’s call those sorts of hints synergistic. Then there must be synergy among the premises

15. The relations are captured more precisely in what is known as “the ideal gas law.” That law can be checked out at <http://hyperphysics.phy-astr.gsu.edu/HBASE/hframe.html> and its relation to boiling can be seen at <http://hyperphysics.phy-astr.gsu.edu/HBASE/kinetic/vapre.html>. In any case, the law expresses more generally the relation between pressure, temperature, and the state change of a liquid to a gas.

to carry the ideas forward.¹⁶

Synergy must exist between the premises, but there is more. There needs to be a parent - offshoot relation between the theoretical core and the models that are developed to explain events. We can sketch examples of what is meant here. Let us assume a very simple theoretical core of behavior: individuals are rational, which we might take in some contexts to mean that they choose behavior to maximize their *expected value* (see the definition). And now let us show how this conjecture could lead to various justified conclusions.

Begin with our core premise. Further, note that an individual's vote is not very likely to determine the outcome of the election. Then a voter motivated by the difference that her vote could make in an election, will have a somewhat greater incentive to vote if the election is close than were it a 'landslide' election. So, holding other conditions constant, we expect that voting in close elections will be greater than in landslide elections. Such an argument can be formalized and shown to be deductively valid. What we would have is a simple rational choice model of turnout in elections (see p. 59).

The same conjecture regarding expected value rationality could be used to explain why voters are ignorant of the candidates for whom they vote (see p. 49). If they choose to spend time absorbing information, they will choose information that will maximize their expected value. Given limited time, they will seek, acquire, and absorb information that is sure to help them. Information about the candidates will only be helpful to the extent that their vote makes a difference in the outcome of the election. What we have here is a simple rational choice model of voter information acquisition.

The two conjectures, regarding voter turnout and information, both use some of the same core hypotheses regarding rational choice: individuals behave in accordance with rational choice, self-interest and expected value. It is this deductive extension of the core (parent) conjectures into multiple arenas that make up the rational choice theory. The extensions are the offshoot models. In each model, there will be different premises. Some will have to do with the environment of choice, and some with the particular problem at hand. But there will also be the core conjectures and the synergistic relation between the premises used to derive the conclusions. So for example, take the turnout model. The synergy comes from using expected value to explain changes in behavior we linked to probability differences regarding the efficacy of the individual's vote in close and landslide elections. Using this notion of rational choice behavior to derive conclusions will require that the other premises concern either values or probabilities. Tests of the many models then all serve as indirect tests of the core, or parent, theory.

Definition - *Expected Value*: the expected value of an item (for example, a door prize ticket) is the sum of each of the values of the contingent possible 'outcomes' times the probability of that outcome occurring. If the singular grand prize is a TV or cash worth \$400, and only one of 1,000 tickets is a winner, the expected value is \$.40. But if there are 10 second prizes of \$20 each being given out, then one has a 10/1000 chance of winning a second prize (the expected value is \$20/100) plus a 1/1000 chance of the first prize giving the ticket a value of \$.60. Similarly if you are to receive a dollar for the value of a throw of one die the throw has an expected value of \$3.50. The numerical possibilities are 1, 2, ... 6 each with a probability of 1/6. Hence the expected value of the throw is $(\sum 1..6)/6$ or $21/6$ or \$3.50.

16. So, for example the knowledge that Toby is my pet, plus a premise regarding the boiling point of water, doesn't help us go any further in our understanding of Toby's predilection to be near his mother.

This means that one needs to be quite precise about the behavioral premises that we use to construct our models so that we can be sure they properly imply interesting arguments.¹⁷

For universals to be useful, they need to be interesting – they must get us beyond our starting point and add to our understanding. They do this by their being able to link up to other known facts in our reasoning process, allowing us to arrive at new generalizations and helping us to generate a multitude of models. It is also necessary for them to be correctable, which requires that they are *at least possibly false*. But possibly false is too little: they must be presumably true, *and* possibly false. They must add new bridges between our concerns, weaving together an interesting theoretical fabric.

So universal claims are problematic. They mustn't be too general because they need to be interestingly and presumably true, while possibly false; further, to be interesting they must allow for inferences to be logically inferred that get us beyond our common sensical understanding of our environment.

RATIONAL CHOICE THEORY: PREMISES TO UNDERSTAND POLITICS

The arguments and explanations that follow in the coming chapters are based on a core theory that many label the 'theory of rational choice.' The theory presumes decisions to be the result of conscious choice made by individuals to further the realization of their own preferences.¹⁸

This raises some definitional issues. If one works only to satisfy one's own preferences is one necessarily self-interested? We will say "No". An individual might have preferences for the helping of others: she might prefer to improve others rather than herself. In such a case, she has non-self-interested or other-regarding preferences. But she does *have preferences* and if she chooses using them, that she makes her choices in conformity with these preferences. Rational choice theorists usefully append other presumptions to the core notions of rational choice theory so as to be able to infer more precisely what sorts of choices will be made in different contexts. These additional assumptions include self-interest, expected value valuation of alternatives that have probabilistic outcomes, and so on.

Further, theorists about politics are often concerned about behavior in typically political institutions and contexts such as legislatures and elections. Many of these political contexts are quite distinct from those at the center of the other social sciences such as economics or sociology. We will be elaborating models of rational behavior in some distinctly political contexts. But to do so we must clarify the notion of rational choice and a good place to start might be to go back to self-interest.

SELF-INTEREST

17. Luckily, Von Neumann (1944) developed, as a foundational aspect of his theory of games, a theory of valuation of options that does precisely this. He develops a mapping of individual preferences into utility numbers in a manner that makes it the rational choice to maximize the expected value (see the definition) of the stakes involved. The exposition in von Neumann and Morgenstern (Chapter 2, 1944) is accessible and lucid, as is the discussion in Luce and Raiffa (Chapter 2, 1957). I will not treat the concept of utility here.

18. Our notion of preferences subsumes values and tastes.

The notion that anything one chooses to do is somehow in one's self-interest is linguistically plausible, but does not help us separate other-regarding behavior: it doesn't allow us to generate interesting distinctions. Such a definition forces us to say that all rational choice behavior is self-interested. You may (or may not) believe this to be so, but it would appear to be an empirical question: not one to be settled by semantics. We need a definition that allows us to distinguish between self-interested and *other-regarding* behavior. Our definition of *self-interest* is not caring for the welfare of others when their welfare doesn't impact yours directly. Then self-interested behavior will be behavior motivated so that an individual would bear no costs to help (or hurt) someone else, unless doing so would lead to some expected benefit for herself. Perhaps such a definition is too restrictive, but it has some positive features: 1) its falsification *is* operationalizable: it divides all behavior into two non-empty classes; 2) it keeps the tie to choice over which we have some theoretical leverage. We can imagine, and perhaps observe and study and theorize about behavior that is not self-interested.¹⁹ So doing permits us to study human behavior that goes beyond the common sensical claim that we are all self-interested. Perhaps the manifestation of such behavior will be dependent upon the institutional environment of the behavior. Markets may be quite conducive to self-interested behavior; voting booths less so.

PREFERENCES

Preferences are the term we use for values people place on outcomes, and alternatives from which they are to choose. As such, preferences are a relationship that one imposes upon one's alternatives: I prefer coffee to chocolate ice cream means that for me, coffee is superior to chocolate and when faced with the choice, I will pick coffee ice cream. But preferences don't get us very far unless we make assumptions regarding their properties. For example, if we argue that our preferences vary from moment to moment, that they are unstable, and contradictory we would have a less useful theory of behavior built on the foundation of preferences. A set of assumptions must underlie our concept of preferences. We assume that people's preferences are well ordered and stable in any choice context or situation.²⁰

What does well ordered mean?

Traditionally this has meant that the preference relationship is *transitive* (see the definition), much like the relationship heavier than, or older than, and *unlike* the relation mother of. So we can see that if Irving is heavier than John who is heavier than Kyle, Irving is heavier than Kyle (i.e. the relation 'heavier than' is transitive). Not so for 'mother of:' if Jane is the mother of Isabelle who is the mother of Kathryn, Jane is certainly not the mother of Kathryn (i.e. the relation 'mother of' is not a transitive relation).

Definition - Transitive: A relationship 'R' is transitive if x, y and z relate by R such as xRy, and yRz, then it follows that xRz. To illustrate: older than is transitive because if David is older than Jane and Jane is older than Alex, it follows necessarily that David is older than Alex.

19. The conjecture that we do not behave as self-interested creatures was put forward by Adam Smith (1759). He said, "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it." Indeed, nuanced experimental tests of self-interest have been undertaken. One of the first was Frohlich et al, 1984. More general views of subsequent experiments can be had in Frohlich and Oppenheimer, 2004, and Roth, 1995. Frohlich et al, 2004 expand the findings. I explore this topic further in Part IV of this volume.

20. Note that this is not the same as assuming that preferences are stable and consistent over all time and contexts. Experiments show that assumption is false (Kahneman and Tversky, 1979, 1982; Grether and Plott, 1979, among others).

It is also presumed that in any situation, individuals evaluate and compare all the options available to them (i.e. preferences are *complete*). This is expressed by insisting that individuals either find one option more valuable than another (i.e. they prefer one of the options to the other) or hold them in equal regard (which is called '*indifference*'). In this sense the preferences can be said to be 'well ordered':²¹ all the options can be ordered from best to worst (with ties) in an unambiguous fashion.

Research Frontiers: Experiments, Doubts, and Ways Forward

But are these assumptions accurate? Are our preferences transitive, stable, and complete? The accuracy of these assumptions has been one of the major issues regarding rational choice theory.

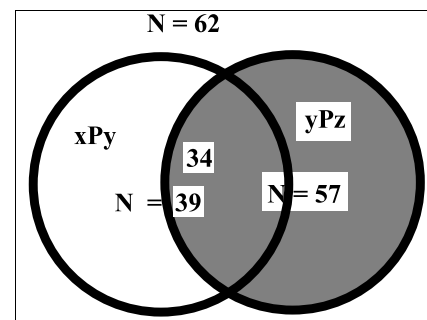
The first significant doubt regarding the premises was generated by an in-class experiment run by Kenneth May (1954). He asked 62 male students to make choices. They were to indicate their preferences regarding a hypothetical wife. Three alternative hypothetical partners were given: one was wealthy, one was beautiful, and one was intelligent. The students had to choose between one pair, and then another (e.g. wealthy v beautiful, and then the winner from that pair v intelligent). The results were that most students chose intelligence over beauty (39 to 23); beauty over wealth (57 to 5); and wealth over intelligence (33 to 29). These numbers imply that some persons had preferences that did not exhibit transitivity (i.e. were intransitive) - see Sidebar 2.

Would that this was all. Serious doubts were introduced by Kahneman and Tversky (1979) who developed a theory as to precisely how and when choices among risky alternatives would prove to be inconsistent. Entitling their theory "Prospect Theory," it was received with great reservations by economists (Grether and Plott, 1979) but hundreds of experiments later, these hurdles have led to various weaker formulations of the rational choice theory being put forward (Bendor, 1995; Wendel and Oppenheimer, 2010; as well as the 'evolutionary' models of choice as reviewed in chapter 13 of Dixit and Sheath, 2004). These reformulations are useful, and the cutting edge in research and have led to more accurate theories within the same framework: tying choice to preferences.²²

CHOICE

Sidebar 2 – Experimental Evidence of Intransitivity

There were 62 people. The results are shown in the Venn diagram. They show a violation of individual transitive preferences.



57 people (in the striped circle) preferred y to z. Only 5 didn't have this preference. 39 are in the solid circle (each holding x preferred to y). Since only 5 can be outside the striped circle at least 34 of the 39 must be in the overlap and hold both x preferred to y and y preferred to z. They must hold (by transitivity) x preferred to z. That would leave at most the others (i.e. 62-34 or 28) who should hold z preferred to x. So at least 5 (33 - 28) must have intransitive preference orderings.

21. It is also usually presumed that preferences are *reflexive*: an individual will evaluate any item as equal to itself.

22. But see Green and Shapiro, 1994.

Choice by the individual is presumed to follow her preferences but there are other variables that must be considered. So, for example, you may prefer to win the lottery rather than to pay for a bus ride, but since the cost of the lottery ticket can also lead you to gain nothing, you may find that the gamble isn't worth it. Your valuation is modified by the probabilities that are involved in a manner reflecting *expected value* as defined above. Similarly, you may wish to purchase both the bus ride and the lottery ticket, but discover that you don't have enough money in your wallet. Thus, your choice is constrained by the resources available to you. (This constraint is referred to as a *budget constraint*).

In other words, persons make choices over *actions*, to obtain valued outcomes (a presumption that - except when the actions themselves have positive or negative value - the ends must justify the means). The choices are made in some sort of constrained environment - usually constrained by 3 things: a defined set of outcomes, a budget or resource constraint, and some set of costs or prices. Social situations involve a set of individuals who presumably each have their own preference.²³

Can our premises of rational choice help us understand politics? To do this, we must tie politics to conscious choice and preferences. We must see how predicting choice behaviors helps us understand political outcomes. Such macro phenomena of political bargains as policies and outcomes are in part determined by the rational choices of individuals. The premises let us construct arguments and arrive at principles regarding politics.

It is useful to think of politics as arising when individuals can't satisfy their needs without organized collective action - at least organized beyond the nuclear family.²⁴ Governments aren't the only institutions that organize people for collective action. Political behavior goes beyond behavior about governance. Politics might usefully be defined as behavior oriented to enable a group of persons to work together regarding a shared goal to accomplish what they can't accomplish separately. This perspective leads us to consider the relationship between both individual and collective choice as well as between individual and collective action. It highlights the conflicts between self-gratifying behavior and behavior useful for furthering shared or group objectives. This line of analysis, often referred to as the logic of collective action,²⁵ is central to much modern analyses of political behavior and has been formalized in numerous places. We explore collective action in Part I of the book. How a society makes a centralized policy decision by aggregating the decisions of a group of individuals is usually referred to as the field of social choice, and will be explored in Part II of the book.

Because our perspective starts with individual choice, we will need to also consider how specific institutional contexts impact the incentives individuals have. These political institutions differ from the markets which are the central context for economics. In markets, individuals are making decisions to buy or sell usually assumed to primarily affect themselves.²⁶ In contrast, politics concerns decisions that are being made for groups of people. Most of the time, the group has a select few who are making the decision for the whole group. Such distinctions between those who

23. Individuals often influence one another: their preferences need not be assumed to be immutable.

24. Concerns such as family relations are not our central focus.

25. The name stems from the justly famous volume by Mancur Olson, The Logic of Collective Action (1965).

26. The special case when this isn't the case, economists dub as cases involving agents or 'externalities.' Both are discussed below. Externalities are usually considered a type of 'market failure.'

make the decisions and those who are to be affected by them lead to unique problems for political institutions. For example, what is best for the group? How do we know? What are the unique problems of political institutions in achieving the group's interests? These issues are dealt with in Parts III and IV.

Rational choice theory is of significant help in illuminating the relationship between individual decisions and group outcomes. It allows us to develop models with testable, interesting conclusions. Some of these conclusions seem to be correct, while others will prove to be problematic. The problematic conclusions will lead us to identify frontiers that require further research to figure out how better to formulate the presumptions used in the models. In examining the implied conjectures that appear incorrect, at times I will discuss how experiments have been used to shed light on the question.

FOR FURTHER READING

Logic Knowledge & Truth

Edelman, Gerald M. (1992) Bright Air, Brilliant Fire: On the Matter of the Mind. New York: Basic Books. Great overview of how the brain works in a manner that reflects a correspondence theory of truth. It also touches upon points I develop below requiring a probabilistic relationship between values and choice (see p. 39, 132).

Jeffrey, Richard. (1981) Formal Logic: Its Scope and Limits. McGraw Hill: NY This is one of many good introductory logic text books.

Prior, A. N. (1970) "Correspondence Theory of Truth," Encyclopedia of Philosophy. Vol. 2, Macmillan: New York, pp. 223-232. Excellent essay on correspondence theory of truth.

White, Alan R. (1970) TRUTH. Doubleday Anchor: Garden City, New York. Excellent essay on truth. The part on the coherence theory is also contained in the Encyclopedia of Philosophy.

Philosophy of Science

Giere, Ronald N. (1984) Understanding Scientific Reasoning, 2nd ed. Holt, Rinehart and Winston: Chicago, Ill. This is a simple introduction to the major questions of what it means to reason scientifically. It focuses on the issue of justifying arguments. Early editions also contain four chapters on logic and statistics.

Giere, Ronald N. (1988) Explaining Science: A Cognitive Approach. Chicago University Press: Chicago. Giere presents a very interesting cut at how to explain science. Argues that we should primarily consider how scientists judge theories, and what sort of "representation" of reality theories give scientists.

Hempel, Carl G. (1966) The Philosophy of the Natural Sciences. Englewood Cliffs: NJ. Prentice Hall. Solid and useful. Not very detailed in argumentation. In some ways Lambert and Brittan is better. But the story of Semmelweis is classically well done.

Lambert, Karel and Gordon G. Brittan, Jr. (1970). An Introduction to the Philosophy of Science. Solid reviews of controversies such as the theory of induction, probabilistic explanation, and the nature of math.

Maxwell, Nicholas. (1972) "A Critique of Popper's Views on Scientific Method," Philosophy of

Science, June, 131-152. Says Popper's motivations of the notion of methods is incomplete and thus falsification is not shown to maximize the chances of progress in science. This is an important critique of Popper.

Nola, Robert (2004) "Pendula, Models, Constructivism and Reality." Science and Education 13: 349-377. Interesting look at the use of models as abstractions. Discusses the role of abstraction in science, and how this creates a problem of 'fit' that is not easy to deal with. He argues that much of the debate in the philosophy of science is about how to deal with reality given that models are deliberately 'inaccurate.' Implicitly Nola is arguing against a pure coherence theory of truth, placing a useful threshold need for 'realism' in science.

Popper, Karl (1959) The Logic of Scientific Discovery. New York: Harper and Row. [First Edition, 1934.] A once revolutionary approach to the problems of scientific method. Clearly not the last word, but a great start.

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Rational Choice Theory & The Nature of Politics

Bendor, Jonathan (1995). "A Model of Muddling Through." American Political Science Review, v. 89 (#4, December): 819 - 840. A remarkable paper on the nature of bounded rationality. 3 levels of analysis. 1) on the competence of the decision maker (the problem of making a good decision); 2) the search for and evaluation of alternatives to the status quo; 3) multiple decision makers. He shows the conditions under which the expected value of the alternatives chosen over the status quo improve as a function of the competence of the decision maker and the search and evaluation techniques.

Diermeier, Daniel. "Rational Choice and the Role of Theory in Political Science." in Friedman, Jeffrey (ed.), (1995) The Rational Choice Controversy: Economic Models of Politics Reconsidered. New Haven, Conn.: Yale University Press. 59-70. Discusses the limitations of the Green and Shapiro citation below. He points out that one can't usually test an assumption directly and that theories contain non observable, non directly testable, terms. Argues that the biggest problems with rational choice are: 1) How are we to relate deterministic predictions of the theory with the stochastic empirical analysis of the behavior? And 2) how do we put learning and evolution in rational choice?

Green, Donald P. and Ian Shapiro (1994) Pathologies of Rational Choice Theory: A Critique of Applications in Political Science. New Haven, Conn: Yale University Press. An alternative view. They argue there has not been a serious attempt to see whether rational choice theory can empirically explain things of interest to political science. This is a serious case study as to what it takes to get a theory accepted or rejected. Looks at both experiments, and field studies. Very clear and controversial.

Hausman, Daniel M. (1989). "Economic Methodology in a Nutshell," The Journal of Economic Perspectives, v. 3, #2 (Spring): 115-127. He looks at the empirical appraisal of rational choice theory and specifically at the variety of approaches of evaluation of the theory. Concludes that we need to heed the tests of the theory and that disconfirmation by itself is not useful as it doesn't reveal how science has progressed.

- Kahneman, Daniel and Amos Tversky (1979), "Prospect Theory: an Analysis of Decision Making Under Risk." Econometrica 47 (March): 263-291. An interesting theory of how our expressed choices vary as a function of the context of choice. A challenge to the presumption of preference consistency.
- Nagel, Ernest (1963) "Assumptions in Economic Theory." American Economic Review (May): 211-219. Discusses the pitfalls of pure instrumentalism as a template for the development of rational choice theory.
- Shafir, Eldar and Amos Tversky (1995). "Decision Making," in Edward E. Smith and Daniel N. Osherson, eds. An Invitation to Cognitive Science: Thinking Volume 3, Second Edition, Cambridge, Mass.: MIT Press. 77-100 Fine review of the psychological findings of anomalies to the standard rational choice model.
- Simon, Herbert A. (1986) "Rationality in Psychology & Economics," The Journal of Business. v. 59, no. 4, Part 2 (October): pp. S209-224. a specially edited volume (by Robin M. Hogarth and Melvin W. Reder). A useful summary, from an economic point of view, of the major problematic findings in psychology regarding the rationality theory.
- Tversky, Amos and Maya Bar-Hillel (1983) "Risk: The Long and the Short." Journal of Experimental Psychology: Learning, Memory and Cognition. Vol 9, No. 4, pp: 713-717. A careful working out of a few misunderstood details regarding rationality. They show that some difficulties people have in predicting rational choice really stem from such things as not quite meeting the assumptions in the models.

PART I: THE LOGIC OF COLLECTIVE ACTION

We turn our attention to politics under two circumstances. Politics is vital when people share interests that are worth pursuing as a group but are too costly for any one individual or family to undertake alone. Politics also grabs our attention when politicians achieve things that are not in the people's interests. We begin our examination of politics by analyzing the positive basis for politics grabbing our attention. Why are political institutions needed when the interests of a group surpass the means of any single individual? Later we will consider how the political institutions can be driven toward other ends.

Politics enables us to achieve together what we can't achieve separately. This view enables us to connect the premises of rational choice with the political life we all observe. Mancur Olson, brilliantly used this connection to fashion the first models of collective action. He put the point clearly enough to catch political scientists' attention. As Olson put it in the opening of his 1965 blockbuster, *The Logic of Collective Action*:

“The idea that groups tend to act in support of their group interests is supposed to follow logically from this widely held premise of rational, self-interested behavior. . . . But it is *not* in fact true that the idea that groups will act in their self-interest follows logically from the premise of rational and self-interested behavior. . . . The notion that groups of individuals will act to achieve their common or group interests, far from being a logical implication of their individual interests, is in fact inconsistent with that assumption.”

Since Olson's clarion call, collective action problems has been central to the development of modern political science.²⁷ Great efforts were spent developing and testing models of collective action in the form of what has come to be called social dilemmas. These models spelled out the implications of rational, self-interested behavior in collective action situations. Models of individual behavior starkly juxtaposed the potential welfare of the group with the welfare of the individual. They focused attention on the incentives facing individuals in their decisions. Working through the logic of the models one sees how details of institutional structures can lead to more, or less, rewarding outcomes. These models demonstrate the limitations of purely voluntary behavior. In doing so, they also help us sketch a “proper realm” of government.²⁸ Governments ought to handle those situations where the self-interested behavior of members of the group lead to outcomes for the group that all in the group can agree could be improved.²⁹ Most of these implications and arguments are introduced and discussed in the next chapter.

Before delving into the details of the argument, its premises should be clarified. In its most basic form there are two behavioral premises: rationality and self-interest (see the Introduction). As will become clear, these are important to keep separate. They help us analyze the choices that we as members of a group have, and the historical possibilities that our groups have and have not been able to realize.

27. Olson's 1965 blockbuster was certainly not the first analysis of its kind (see, for example, Baumol, 1952).

28. However other concerns such as the protection of liberties, property and support of the needy will be considered and will broaden our normative sketch for the role of governments.

29. The technical term for such situations is Pareto sub-optimal. This notion of optimality was given to us by Vilfredo Pareto, an Italian Economist of the late 19th and early 20th centuries.

The conclusions one can reach with the arguments concerning collective action actually go far beyond collective action and touch on many aspects of politics including questions of political leadership and the behavior of citizens. There are implications here for observers of politics, activists, analysts, and moral and political philosophers. These extensions will be handled in Chapters 2 & 3. Chapter 1 analyzes why we must, so often, go beyond voluntary contributions to get collective needs met.

PART II: COLLECTIVE CHOICE

In earlier chapters (see p. 24), we saw that groups can overcome inherent difficulties involved in providing themselves with public goods. Another aspect of the problem was not discussed. Solving dilemmas to achieve shared goals usually requires collective choice: a centralized decision. Just because unanimous support for *some* collective solution should always be possible, as all observers of politics have witnessed, rarely is collective choice of any sort - much less by unanimity - easy to come by. Frequently more is needed than making sure the group is organized to collect and apply resources needed to carry out collective projects. Collective, binding decisions are required regarding what is to be done. This process is anything but simple. Some of the roadblocks that make for some of these difficulties are analyzed in this (and the next) part of this volume.

We humans have a long and difficult history trying to engineer 'good' political systems to reach collective choices. We have ruled ourselves with various sorts of regimes, which we might divide into two overly broad classes: authoritarian and democratic. And here, in spite of the contemporary Western bias to democracy, looking at the landscape of political history, one notices that humans have prospered under a variety of regimes. Civilization did not require democracy. But it did require an element of decent government. Since a degree of general prosperity is needed for the leaders, even the rare Stalins and Caligulas of the world have to consider constraints to their behavior in order to bolster the welfare of their citizens.³⁰ Although, in most situations, the fate of governments are at least loosely tied to the interests of the citizenry, the requirements of prosperity seem quite constraining:³¹ In modern times the attempt to tether governments to the interests of the citizens has been intimately related to the establishment and design of democratic governments. Much of this effort has proven successful. Modern democracies have had quite a track record at improving the conditions of their citizens.³² In this section of the book, I explore some properties of democratic governments that help us understand their potential, and their difficulties.

The justification of governments has certainly shifted over the millennia. From the satisfying of the lofty demands of the gods, we have come down to the satisfaction of the terrestrial needs of citizens. With such a general loss of celestial grandeur, and such strong findings, it is not surprising that there has developed a considerable degree of consensus regarding the preferred form of government: democracy. Both classes of political system, authoritarian and democratic, have many variations, but modern times and empirical methods have tended to confirm that democracy yields substantial benefits (see, for example, Halperin, et al. 2004). These benefits include:

- fewer militarized interstate disputes causing less battle deaths with one another;

30. If as Napoleon observed "An army marches on its stomach," (c.f. <http://www.brainyquote.com>) then welfare must be attended to, at least enough so that the soldiers can fight (see Frohlich and Oppenheimer 1974) and the polity has sufficient bounty for the leader to plunder (Olson, 1993). More on this can be found below (p. 104)

31. The observations of DeWaal (1982) regarding power and governance among chimpanzees is instructive. Certainly, chimps have no form of democracy, but when the basic functions of their governance (such as protecting the young) are not properly performed, protesting behavior leads to coalitional shifts that overthrow the alpha male and his 'gang.'

32. See, for example, the overview by Mackie, 2003; Sen, 1999; and Halperin et al., 2004. And note the seminal work of Sen on this subject (c.f. fn. 71)

- fewer civil wars;
- virtually no refugee crises;
- much less murder by government;
- higher average citizen happiness.

Democracy is associated with better health indicators (life expectancy and infant and maternal mortality, for example). These indicators have a stronger and more significant correlation with democracy than they do with per capita income, size of the public sector, or income inequality. Even if we only consider poor countries, liberal democracies are associated with better education, longer life expectancy, lower infant mortality, better access to drinking water, and better health care than dictatorships.³³

Perhaps arguments still exist supporting other governmental structures for some economically developing states, but for the stable of developed states, the debate is over. So in considering the problems of collective choice, in this and the next part of this volume we focus mainly on democratic regimes. But surprisingly, we still find road blocks to reaching collective decisions that could benefit everyone.

Imagine a group that proposes to make its decisions by majority rule. One might believe that translating a majority's preference into a social choice is simple. Indeed, the uninitiated reader is unlikely to imagine the complexity of the difficulties one faces in translating individual preferences to social choice. But there are clues that our problem might be big. For example, note that there are different majorities in any group. Indeed, a group of 3 has 4 different majorities (3 different 2 person majorities, and one all encompassing majority of everyone). A group of 5 has 16 different majorities. Needless to say, these many different majorities may not have consistent desires. It might seem common sense to presume a direct connection between democracy and the will of the majority. But when there are multiple majorities, this notion may be far more difficult to interpret. Hence, relating a group's choice to the preferences or the welfare of the individuals could be difficult. Even if there may be unanimous agreement that, say, the status quo is not good, and that some particular alternative is better, each of the majorities may have a preferred way of beating the status quo that can lead to obstacles to change. And what if the rules don't call for majorities?

Assuming that individuals reach their decisions through an individually rational process, what can we say about the relationship between the rules and the outcomes to such decision processes? Certainly the details of the rules must make a difference to the quality of the outcomes. I approach at least two aspects of this puzzle: First, how the rules and structures of the political institutions interact with the individual decision makers to determine the outcomes, and then, mainly in Part IV of this volume, the relation between the institutions and the achievement of some metrics of the welfare of the group.

These relations have been central to the perennial struggles of politics. The next chapters explore some of these relationships and questions by looking at a special case: preferences are constrained so that we can analyze them geometrically. More specifically, preferences reflect how far the proposed outcomes are from one's ideal point: as if the alternatives could be arrayed along a line, or in a space. This permits democratic decisions to be analyzed by what is called a 'spatial

33. See http://en.wikipedia.org/wiki/Authoritarianism#Authoritarianism_and_democracy for an accessible summary and citations to some of the major studies supporting these findings.

model of political decision making. In Part IV of this volume I consider social choice without this constraint. There, we will discuss some of the seminal results of Kenneth Arrow, Amartya Sen, and others regarding social choice, social welfare, and social justice and we consider how better to tie outcomes to the welfare of citizens.

Rational choice theory gives us a set of useful tools to look at how the design of institutions and other trappings of the political system affect the quality of the deliverables of the system: i.e. the policy outcomes. If we do not demand too much, generally acceptable decisions can be shown to be a reasonable expectation of a functioning democracy. And careful institutional design can further improve on our expectations a bit.

As in Part I, we begin with the simple story, and then milk it for all it's worth. We then will pursue some of the more difficult problems. Chapter 4 will examine political and electoral outcomes in a radically simplified spatial world: one of only one dimension. After establishing some fundamentals, in Chapter 5 we move on to the more complex and at times more disappointing implications of relaxing the presumption of 1 dimension. We end Chapter 5 with some findings that touch upon general democratic outcomes.

PART III: POLITICAL INSTITUTIONS & QUALITY OUTCOMES

How can the design of democratic political institutions help, or obstruct, the achievement of such goals as Pareto optimality, responsiveness, etc.? To explore this, begin by considering the general necessity of political institutions and then the general difficulties in holding such institutions responsible to the citizenry.

We have already seen how some aspects of institutional design can affect outcomes. For example, in Part II we examined how filibuster rules and other institutional details can change expected outcomes, how alienation of voters can affect electoral outcomes, and in Part I we saw how disorganization can affect the preservation of common-pool resources, and how, with collective outcomes, there is a tendency for free riding and rational ignorance. These conclusions stemmed from assumptions about individual behavior. Here, however, we consider particular problems of institutional design *per se*.

To frame the discussion, in Chapter 6, I address two big questions: first, “Are political systems really necessary?” And then, “Why is it so hard to tether political leaders to act in the interests of their subjects?”

Are political institutions necessary? From Ayn Rand, Robert Nozick, and Friedrich Hayek (Economics Nobel laureate, 1974) to Ron Paul and numerous ‘think tanks’ such as the Heritage Foundation and the CATO Institute, and some large segment of the current American Tea Party, there has been an advocacy of something like a minimalist state: a minimalist political structure of free market capitalistic anarchy. Such a vision is deeply flawed.

Until about 50 years ago, one of the major justifications for the state was to correct certain ‘failures’ that naturally occur in markets. One of the most prominent such market failure is called an *externality*. An externality occurs when a market transaction does not reflect the costs (or benefits) that accrue to those who are not parties to the transaction. For example, consider the price of an item set in a market by the interaction of the buyer and seller. Presumably, their preferences and interests are taken into account. But if the production of the item causes pollution, there will be costs to others, not party to the transaction, and not compensated by the transaction. They suffer a cost: called an ‘externality’ of the transaction. It was long held that to correct the situation governmental action was required: regulation was needed to ensure compensation and so on. But Ronald Coase (Economics Nobel laureate, 1991) argued this was not necessary. And his argument has served as a foundation for the drive for a minimalist state. The argument is known as the Coase Theorem (1960).³⁴

Externality: An externality is an effect (benefit or cost) of a transaction (or exchange) that is not factored into the underlying terms of exchange. For example, were I to consider buying an azalea bush for my front yard, I probably wouldn't take into account the joy that the blossoms bring my neighbors across the street.

Coase's theorem is easy to restate and discussion of it is available in any number of text books: “As long as underlying property rights are defined and enforced, in the absence of bargaining and transactions costs, parties consuming and producing externalities will be able to reach a Pareto

34. The word ‘theorem’ as Coase did not actually ‘derive’ it. Rather, he told some stories that made it seem plausible.

optimal agreement among themselves.” In other words, governmental action is not needed beyond the facilitation of a bargaining arena. The theorem addressed the many governmental policies that cited cases of market failure, and asserted that settlement and amelioration of these problems need not be linked to governmental action. Although this argument was shown to have a sizeable hole by Aivazian and Callen (1981) it stayed a bedrock principle underlying many policy arguments for deregulation. So we begin Chapter 6 with a reexamination of both the Coase Theorem and the necessity for governmental institutions.

After illuminating the error in Coase’s argument, we move to problems inherent in all political institutions. Many of these problems center on getting professional politicians to take account of the interests of the people or citizens. Using this concern as a template, we think about the difficulties of getting politics to be structured so as to deliver programs that the people need. This will be discussed in terms of a modified ‘principal-agent’ problem.

The *principal-agent problem* is one of keeping the hired hand (the agent) responsiveness to the needs of the employer, the principal (see Figure 34). The main question is, “How can the principal be assured that the agent’s behavior will conform to the interests of the principal?” This problem is much studied in law, economics and business administration. Agents - who are making

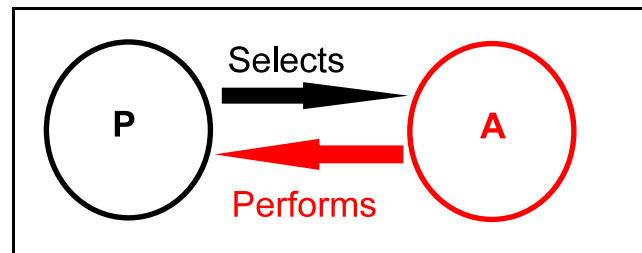


Figure 1: Principal-Agent Problem

decisions and taking concrete actions for principals - have more complete and better information about the choices they are making than do the principals who hired them. So with such asymmetric information their behavior can deviate from the guidance and interests of the persons who hired them.³⁵ Further, with such asymmetric information the principal has to interpret the information that is given her by the agent. The principal absorbs the information and can alter her expectations. This notion that receiving information changes expectations is referred to as *updating*. Solving the problem of controlling the agent requires finding rules so that the self-interested rational choices of the agent coincide with what the principal desires.³⁶ This is hard enough. But there are further complications that beset the classical principal-agent problem when it is nested in a political or administrative context.

Once we understand the complexity of the principal-agent problem in political contexts, we will refocus on gaining agent responsiveness. In Chapter 6 we examine one part of this question: the problem of commitment.³⁷ Some democratic governments have serious difficulties making required long-term policy commitments. An example would be the under funding of infrastructure maintenance as in building a light rail system and letting the tracks deteriorate. The problem of commitment is also manifest in such ‘pay as you go’ programs as social security. This public policy problem is manifest in, but certainly is not restricted to, the United States. Is it a characteristic of aspects of a political system’s design?

35. Madoff’s recent financial Ponzi scheme is but one example of distortions that stem from such a conflict.

36. A rather insightful application of principal-agent models to politics development may be found in Besley (2006).

37. Notice that long term commitments often come at the price of responsiveness in the present (Rogowski, 1999).

Since some non-democratic systems have, in some ways, done quite well by their citizens, we might wonder, “Are there improvements that democratic change can bring that are difficult to get from non democratic systems?” Given these improvements, what can we say about regime change? So I end chapter 6, with some analysis of the limitations and processes of transition to democracy and regime change.

In Chapter 7, we focus on maintaining and improving responsiveness of democracies and related design and behavioral problems. More specifically, I look into such suggestions as that of Montesquieu to have a separation of powers, and the notion of checks and balances, and Federalism. Undoubtedly, there are benefits to such arrangements. But all too often the analysis stops without an exploration of the difficulties that ensue from these features. So I examine some of the effects of such properties as checks and balances, separation of powers, and multi-layered governments. At their heart, these features imply a division of labor (e.g. she who legislates doesn't administer) and such a specialization can lead to difficulties much like those we have examined previously. These arrangements generate veto points that make the changing of a status quo more difficult. This analysis will shunt us back both to shadows of the prisoner dilemma game and foreshadow the kind of impossibilities reflected in Arrow's impossibility theorem that is discussed in Part IV.

PART IV: SOCIAL JUSTICE, CHOICE & WELFARE

The many hurdles identified in earlier sections of this volume project a tone of pessimism regarding politics. We found that without formal political institutions, collective interests are unlikely to be properly addressed. But even with formal institutions, the manipulations and preference cycles (as discussed in Chapter 5) and more, the achievement of collective interests appears always threatened. Now it is time to clarify ‘collective interests.’ One objective of political analysis is to identify the relationship between social choice and social well-being (or as it is commonly called social welfare). To this point, all we have identified are some difficulties in this relation. We have some positive work to do.

What are collective interests? As we will find in Chapter 8, trying to conceptualize collective interests runs into severe problems. Is this only because preference cycles make interpretation of results difficult? Can this be avoided by bypassing majority rule? Although we may desire to design institutions to help us hit the target of social well-being, Kenneth Arrow (1963), has shown there will be no easy method to even identify the target. If, as many economists think, individual well-being is to be conceptualized as the satisfaction of one’s preferences, and social welfare is to be understood as the aggregation of individual well-being, Arrow identifies enormous roadblocks to any easy understanding of social welfare. His argument is the main focus of the first part of Chapter 8.

In Chapter 8 we also explore the political nature of social welfare and some of its necessary properties in democracies. I develop the notion of a democratic obligation to social welfare and social justice. This feeds into implications of Arrow’s work. Arrow showed the difficulties both in defining social welfare in terms of individual welfare, and in aggregating individual choices to reflect group desires. Indeed, any notion of a simple, sensible social choice method, as the ‘natural translation’ of a bunch of measures of individual welfare is shown to be quixotic.

On the other hand, Arrow’s arguments are built on the classic presumption that one can’t compare one person’s well-being with that of another. That starting point implies a very messy underbelly to the concept of the ‘people’s interests’ and leads one to wonder what alternative starting points may be employed to get better leverage. Arrow’s arguments regarding the difficulties of aggregating individual well-being are also applicable to problems of meaningful vote aggregation. Discussing this leads us to consider, in Chapter 9, how a variety of voting rules measure up to the job of sensible vote aggregation. But regardless of how individual choices are translated to social choice, the central normative question is how to evaluate the *quality* of social choice.

In light of the challenge of Arrow’s argument, we follow the advice of Amartya Sen and go beyond the presumption of non comparability of individual well-being to make sense of collective interest. But, saying that we *must* make interpersonal comparisons doesn’t tell us *how* to do it. To answer the ‘how’ question, in Chapter 10 I make further presumptions about the nature of individual welfare. These enable us to compare well-being across people.³⁸ But even after that bold step, we still must link those comparisons to conceptualize aggregate welfare. To do this, I employ

38. Such presumptions were the step taken by classical Utilitarians such as Priestly, Mill and Bentham when they advocated the greatest good to the greatest number, and presumed that this could be discovered by addition.

modern social justice theory and report on experimental studies regarding social justice. We find a basis for interpersonal comparison of well-being nested within those theories of social justice. The theories help us justify some interpersonal comparisons of individual welfare.

Adopting reasoning from social justice theory lets us identify the properties we need to focus on to get beyond the theory of preference satisfaction that forms the basis of Pareto optimality.³⁹ Those properties support a different definition of social welfare, well-being, or collective interest: one that focuses on the basic needs of individuals. This notion of social welfare is related to the justification of democracy. It yields a partial answer as to what is social welfare, and how we can measure ‘better’ and ‘worse.’ I utilize this perspective to construct a metric of performance for modern, economically developed, democratic regimes. From this I conjecture some of the constitutional properties that could lead to better performance of these states. The metric is incomplete, but in conformity with the observation of Sen (1999, p. 254). As he put it: “It can also be argued that judgments of ‘social justice’ do not really call for a tremendous fine-tuning precision . . . Rather what is needed is a working agreement on some basic matters of identifiably intense injustice or unfairness.”

Until now, we have mainly identified and collected law-like propositions and knowledge claims. In this section that will be continued. But the reader may feel uneasy with some of these claims, as they are at times built on normative presumptions. Hopefully, I will help the reader over these difficulties.

The field of inquiry discussed in this section can be thought of as containing two problems of aggregation and a political dream or hope of relating them.

THE TWO PROBLEMS OF AGGREGATION

Consider then the problem of social choice in democracy from the perspective of social welfare. The problem of social or group choice is that of aggregating individual choices (votes) into a collective choice (see Chapter 9). Similarly, the problem of social welfare is that of translating the well-being of individuals into social welfare. The great hope of democratic politics is to design mechanisms that securely link social choice to social welfare. This is displayed in Figure 43. There, I depict a central normative problem of democratic politics as the hope, or perhaps dream, that one can get from individual choices to group choices, i.e. to outcomes, that reflect social welfare.

Economists, who see individual preference satisfaction as inextricably related to individual well-being tie the tops of the two vertical lines together. Institutions that satisfy more individual preferences

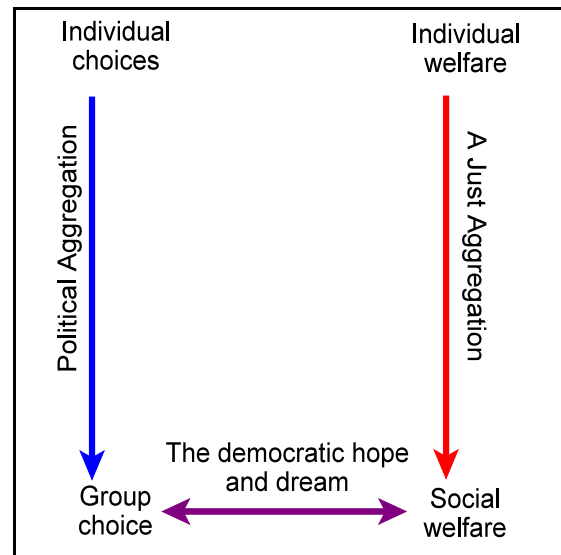


Figure 2: Social choice and social welfare problems and their political relationship.

39. The work in this chapter reflects work done with Norman Frohlich.

increase the well-being of individuals. Markets are then extolled as institutions well designed to satisfy preferences. Another way of viewing markets is that they distribute “To each according to how much he benefits others who have the resources for benefitting those who benefit them.” (Nozick, 1974: 158). Ignoring the economic injustices that might exist, divergence at the bottom of the diagram would then have to do with imperfections in preference aggregation and would be strictly a question of identifying impossibilities (as in Arrow’s theorem) that need to be minimized via the development of better institutions and voting rules.

You have already spent some time on the problem of aggregating individual choices to yield sensible group choices. Since individual choice was explained in terms of individual preferences we solved some problems by restricting preferences in a group to a single dimensional ‘spatial’ context. But the relation to social welfare is more complicated than mere sensible aggregation of votes. In most cases, votes count equally. This holds even when the preference that one voter has for alternative A over B is substantively much less ‘important’ than the preference of another voter on the issue. Your preference or choice equal mine even if the changes in your well-being and mine are clearly unequally affected by the issue. As discussed in Chapter 9, some voting schemes (voting by veto, approval voting, point voting, etc.) are developed to be more responsive to differences in intensities. But they are also limited in their ability to handle the differing impact problem.

Indeed, the traditional manner of handling individual preferences does not let us compare my potential loss with your potential gains. But in everyday life, we do make such comparisons. Consider a concrete situation: Jim and Robert are neighbors. A local transportation issue has come up concerning a bus stop that sits between our houses. Jim wants it moved to another block because Jim doesn’t like the noise and sight of the stopped bus across from his house. Robert likes the convenience that the stop offers him in riding the bus. A vote is taken and Jim votes for moving the stop; Robert votes against. The comparative welfare content underlying these preferences is irrelevant to the aggregation of votes into choice. But such content could differ wildly and could change behavior as in this altered illustration. Assume Robert is severely handicapped and the stop is his only access to transportation. Voting to determine the collective choice might be democratic, but the outcome could be morally undesirable: moving the stop so Jim gains better ‘scenery’ denies Robert access to transportation.

All I have done is added some welfare detail to the preference story. Preferences always have such detail in their foundations. Our abstractions consider preferences without content to them. Hence, they gave non comparable ‘ordinal’ information: Robert preferred the stop to no stop, Jim had the inverse preference. As such they conveyed no interpersonal welfare information. In contrast, in the second example, Jim may be thinking that “Robert’s need for the stop outweighs my desire to move it.” This implies the value or welfare differences underlying preferences *can* be interpersonally compared. Such a conclusion indicates two things: First, we can both get beyond our own self-interest and be sensitive to each other’s needs. Jim might come to prefer to keep the stop so as to maintain *Robert’s* access. Preferences can be other-regarding. Second, to make comparisons with others sensible, we would want sufficient good⁴⁰ information to be communicated as a framework of the aggregation process. Any good political process must be sensitive to these nuances.

If welfare information needs to be communicated along with preference reports, discussion or other more complex communication structures ought to proceed any voting or collective choice

40. Recall the difficulties of getting individuals to reveal their true preferences regarding public goods (see footnote 43).

mechanism. This has implications for the design of political structures so as to tie choice to societal well-being. For these interpersonal judgements to affect the problems of defining social welfare properly, the substantive details behind the judgements must be communicated. To illustrate, for a hospital to have a sensible triage policy, its medical staff must agree on what takes precedence. Information regarding the severity of the patient's status, re the details of the triage policy, must be communicated. Those details then lead to an inter-subjective agreement of the triage evaluations.⁴¹

Is this inter-subjective agreement on the judgements of well-being purely cultural? Or is there something more universal going on? Universal or not, any inter-subjective agreement threatens the Pareto justifying notion that we can make no interpersonal comparisons of welfare. After all, we *do* often change our judgments (and behavior) because of the impact we perceive we have on others, including those whose personal welfare doesn't impact our own. Were we not to allow any such interpersonal comparisons, we would diminish our understanding of humanity. This leaves us with the following law:

Any acceptable conception of social well-being requires that individuals' welfare be comparable in some ways. (Sen, 2002)

Hence, sensible notions of social welfare reflect these sorts of interpersonal comparisons of welfare. If interpersonal comparisons can go beyond a purely cultural justification, and are based on a firmer footing, then any notion of social welfare ought to reflect the interpersonal welfare comparisons that we are cognitively capable of observing, feeling, and understanding. We can not deprive a theory of social well-being the very content that we use to make evaluative judgments. Our understanding and values regarding one another's well-being must figure into any acceptable notions of social welfare.

THE GREAT POLITICAL HOPE

The need to make interpersonal comparisons of well-being the link between group choices and social welfare can not be easily satisfied. A purely mechanical system of electoral and voting institutions (as in casting and counting decentralized votes) can't forge the link. That is the lesson of the combined works of Arrow and Sen. To move to interpersonal comparisons one must have non-mechanical sorts of information exchanges: ones that reveal the well-being information behind preferences. A considerable portion of Chapter 8 develops Arrow's proof that this link can't be easily forged even without interpersonal comparison of well-being. By showing impossibility, Arrow's conclusion reflects that his assumptions are too strong to be descriptive of any extant democratic institutions. As pointed out by Sen (2002) in his Nobel Prize acceptance speech, much of the lack of fit of Arrow's (impossible) conditions and the real world can be overcome by noting that we are aggregating something richer than the classical notion of individual preferences. We need to analyze the relationship between a fuller characterization of preferences and the possibility of improved social welfare.

In any case, for politics to serve social welfare, welfare content must be added to preferences in aggregation. Further, we must recognize processes that facilitate taking these comparative claims into account. The two processes of aggregation (that of individual well-being and of individual choices) may then hopefully be related so that the corresponding products, choice and welfare, have some possibility of connecting. It is only then that we can explore and expand upon the nature of

41. Sayre-McCord (1988) has an interesting discussion of the role of subjective but inter-personal communication in ethics.

social welfare and individual preferences in order to show the relationship between particular political processes and institutions and the achievement of a better society.

