

Chapter 1

The Success and Failure of Rational Choice

The rational choice approach, despite widespread criticism, has reached a point of unrivaled prominence among general theoretical approaches for explaining human action. This prominence extends across the entire range of social sciences. In economics, rational choice remains unchallenged as the dominant, if not defining, theoretical paradigm, and is sometimes referred to simply as the “economic approach.”¹ In political science, largely under auspices of the public choice school, the rational choice approach has grown to the point where it has more adherents than any other, and its threatened dominance has set off an intense debate that has polarized the discipline.² In psychology, rational choice can claim close ties to a wide variety of theories located under the broad rubric of expectancy-value analysis.³ Furthermore, the rapidly-growing subfield of decision theory, while often rejecting the economist’s optimizing version of rational choice, uses it as the standard against which to compare its own bounded rational choice models.⁴ In sociology, rational choice has risen from obscurity to become a major theoretical approach in both Europe and the United States, benefiting from the strong support of some of the most prominent names in the discipline.⁵ While anthropology is less interested than other social science disciplines in grand theories, rational choice has nonetheless been at the center of perhaps the main ongoing theoretical debate in cultural and social anthropology, that over whether interpretation of unfamiliar cultural practices should always proceed on the assumption that participants in such practices are rational.⁶ Furthermore, it could

¹ See, for instance, Becker 1976b; Monroe 1991; Radnitzky and Bernholz 1987; Radnitzky 1992.

² Numerous books have been written on the topic of rational choice theory and political science, many of which are cited later in this chapter. For a journalist’s overview of this intradisciplinary strife, see Cushman 1994.

³ Although the exact boundaries of expectancy-value analysis are open to debate, it is usually defined as encompassing theories in which action is based on the value placed on different outcomes and the perceived effect of each alternative in achieving these outcomes. These include achievement motivation theory, some versions of social learning theory, some versions of decision theory, the theory of reasoned action, field theory, and purposive behavior theory. Although most of these theories do not formally specify their models of action, the major survey of the expectancy-value approach explicitly equates expectancy-value with expected utility, a key assumption in conventional rational choice theories. See Feather 1982, intro., 1.

⁴ For surveys, see Payne, Bettman, and Johnson 1992 and Abelson and Levi 1985. More citations are included in the section on decision theory in chapter 2.

⁵ Coleman 1990, which is arguably the most-discussed work in theoretical sociology to appear in the past decade, is dedicated to rebuilding the discipline on a base of rational choice assumptions.

⁶ Major collections of articles on this issue include Wilson 1970; Horton and Finnegan 1973; Hollis and Lukes 1982. An overview can be found in Urey 1984.

plausibly be argued that the de facto actor assumptions of most midrange theories in anthropology are rational choice assumptions, even if theorists are hesitant to use this label.⁷ In philosophy, rational choice plays the central role in subfields that border most closely on the social sciences. Many, if not most, of the debates in the contemporary philosophy of mind have revolved around rationality and its somewhat milder sibling, intentionality.⁸ Likewise, the most prominent theories of recent years in moral and political philosophy have been based explicitly on rational choice assumptions.⁹ Finally, the bulk of theoretical work in postwar philosophy of language has been devoted to specifying principles that rational individuals would use in communicating with one another. This theoretical focus is shared by pragmatics, the subfield of linguistics most concerned with human action.¹⁰ Furthermore, philosophy of mind, philosophy of language, and pragmatics all share cultural and social anthropology's concern with whether actions (communicative or otherwise) should be interpreted under the assumption that the relevant actors are rational.¹¹

⁷ A prominent survey of anthropological theory notes that, "At the moment, the dominant theory of motivation in practice anthropology is derived from interest theory. The model is that of an essentially individualist, and somewhat aggressive actor, self-interested, rational, pragmatic, and perhaps with a maximizing orientation as well" (Ortner 1984, 151).

⁸ This literature is huge, and no volume covers in detail the full range of issues relevant to these debates. However, the following two survey books are good introductions to major parts of it: Stein 1996 concentrates on the empirical question of whether humans are rational, intertwining it with the normative question of what it means to be rational, and Lyons 1995 discusses different opinions that philosophers have on the proper role of intentionality in the explanation of human thought and action. Intentionality is generally defined as the description of individual states in terms of beliefs, desires and intentions toward action, with a systematic linkage made between the former two and the latter. Hence in social scientist's terms it could be defined as encompassing both optimizing and bounded rationality.

⁹ Without arousing much controversy, it could be said that the three most influential works in moral and political philosophy since the 1970s have been Rawls 1971; Nozick 1974; and Gauthier 1986.

¹⁰ A popular recent textbook in pragmatics argues that the underlying assumption of philosophy of language and of pragmatics is "a rational language user," and that their avowed aim is "to construct a rational philosophy of language use" (Mey 1993, 67). Another popular textbook argues that the mainstream (Gricean) theoretical maxims in pragmatics "describe rational means for conducting co-operative exchanges. If this is so, we would expect them to govern aspects of non-linguistic behavior as well, and indeed they seem to do so." Hence, these maxims derive from "*general considerations of rationality* applying to all kinds of co-operative exchanges (author's italics)" (Levinson 1983, 103).

¹¹ The position favoring rationalizing interpretations is referred to in philosophy as the "principle of charity," originating in Quine's ideas on interpreting speech and extended by Davidson to a general position on interpreting all actions. See Quine 1960, 57-61 and Davidson 1984, chaps. 9-13. The most influential work of recent years in pragmatics was co-written by a cultural anthropologist and a philosopher of language. See Sperber and Wilson [1986] 1995, which presents a theory that is not only rationalistic but in effect adapts to interpersonal communication the common knowledge assumptions found in conventional rational choice theories of

Given all this, it can be said without great controversy that no other theoretical approach in this century has ever enjoyed the same level of ubiquity throughout the social sciences as the rational choice approach enjoys today. Despite this ubiquity, the success of the approach has been very tenuous. Its advance has been accompanied by an intense debate over its relative merit. The approach has been subject to the usual criticism of blatant inaccuracy given by outsiders to any would-be theoretical hegemon and to a predictable fuzzing of its assumptions as it is adapted to a wider and wider range of empirical phenomena. More notably, however, some of the most virulent mere criticisms of the rational choice approach have come from within its own ranks.

Despite the absence of any clear-cut resolution to this debate, there appears to be a growing consensus about the strengths and weaknesses of the approach. To put it briefly, the main strengths of the approach are that its conventional assumptions about actors are parsimonious and applicable to a very broad range of environments, generating usually falsifiable and sometimes empirically confirmed hypotheses about action across these environments. This provides conventional rational choice with a combination of generality and predictive power not found in other approaches. However, the conventional assumptions of rational choice not only lack verisimilitude in many circumstances but also fail to accurately predict a wide range of human behaviors.

It has become clear to many social scientists, including those who work within the approach, that fundamental changes need to be made to the conventional rational choice model. The critics agree that a modified model should be sensitive to cultural diversity and change yet retain generality and allow for deductive hypothesis-building.

This book presents a new model of preference and belief formation, showing how it can form the basis for making such changes. The model draws upon theoretical propositions and empirical generalizations from a wide range of disciplines, particularly from psychological theories of motivation and cognition, sociological theories of value and identity formation, and philosophical theories of coherence and higherorder rationality, integrating them into a unified set of assumptions. It will then be combined with a pared-down rationality-based model of decision making to form a general model of action.

In the substantive chapters of the book, the model of action will be used to analyze a number of major questions in the analysis of comparative development. What accounts for variations in economic development policy choices among Third World leaders? What factors determine the boundaries of ethnic identity in developing countries, and how do these boundaries affect collective political action? What is the causal relationship between socioeconomic change, political culture and levels of political violence, and how does it operate at an individual level? For each question, the hypotheses generated by the model

strategic interaction. See the discussion of common knowledge in the section on the assumptions of rational choice later in this chapter.

are compared to those generated by existing rational choice and non-rational-choice theories.

Although the model is not restricted to the analysis of comparative development, this is the one major area of social science where conventional rational choice theories have been seen as most deficient, hence it provides the best opportunity to demonstrate how the new approach is different. Furthermore, it is an area where non-rational-choice theories have often been criticized for lacking generality or a clear deductive basis, exactly what rational choice could potentially provide.

This book is *not* meant to do several things. It is not designed to demonstrate that there exists a single, best model of preference and belief formation in all important respects, even from a purely positivist criteria. Hence, the book is not meant, by various refinements, to establish the theoretical hegemony of a particular version of the rational choice approach or to demonstrate its all-purpose superiority to other approaches. Instead, it is meant to show that it is possible to devise general assumptions about preference and belief based upon a broad integration of existing ideas in the social sciences and that these assumptions can explain variations between actors and changes within actors over time and significantly expand the predictive power of theories based upon rational choice models. It is also meant to show that a richer set of psychological factors can be systematically introduced into rational choice analysis without robbing it of its generality and deductive rigor. Finally, it is meant to show that a diverse set of social phenomena involving identity, ideology, and culture can be analyzed productively in a reasonably accurate manner using a parsimonious set of assumptions about thought and action.

A few notes about terminology: Throughout this book, I use the term *actors* to refer in a general fashion to the units endowed with agency by various versions of the rational choice model. Despite oft-professed methodological individualism, rational choice models have been applied to a wide range of aggregate units, including firms, interest groups, political parties, and states. *Environment* refers broadly to all relevant variables affecting outcomes, excluding the attitudinal characteristics of actors. Under this definition, an actor's environment includes such things as his, her, or its own physical characteristics, location, and resource endowment. *Attitudes* are defined as the mental orientations that a particular actor holds toward other actors, the environment, and actions at a particular point in time. For rational choice models, the only attitudinal variables relevant to action are beliefs and preferences.¹² *Decision making* refers to the mental process that determines action given a particular set of attitudes. *Beliefs* refer

¹² I define *attitudes* here in the psychological sense of the term, that is, cognitions, motivations and evaluations. This is similar to what philosophers refer to as propositional attitudes, the most prominent of these being beliefs, desires, and intentions. The conventional rational choice model does to analyze evaluations/intentions separately from actions themselves, though this is not the case with some of the non-conventional models (e.g., time preferences) surveyed in chapter 2 or my own model which is presented in chapter 3.

to empirical cognitions, not to normative judgments. *Preferences* refer to the relative desirability of the outcomes generated by actions, not that of the actions themselves, unless an action is “expressive”, that is, valued intrinsically and hence treated as its own outcome.¹³ Preference and/or belief formation refers to a mental process that determines the values of these variables given the past and present experiences of an actor.

The term *model* refers to a set of assumptions about an abstract entity or process, such as a model of decision making or a model of preference and belief formation. *Model of action* or *actor model* refers to a combined set of assumptions about both decision making and attitude formation. The term *theory*, on the other hand, refers to a complete set of assumptions that is used to generate predictions under a specified set of scope conditions. Hence, a rational choice theory incorporates some kind of rational choice actor model, but by necessity also incorporate a set of structural assumptions, i.e., assumptions about environments. *Ad hoc assumptions* refer to assumptions in theories that are not explicitly derived from any model.

The Assumptions of the Rational Choice Approach

The cornerstone of the rational choice approach is what I refer to as the *rational optimization model*. Although rational optimization has been defined and formalized in many ways,¹⁴ in practice, most definitions are consistent with the following assumptions.

(1) All actors hold a set of logically consistent beliefs about the outcomes that will result from their actions. These beliefs may be deterministic, assigning a single possible outcome to each action, or nondeterministic. Nondeterministic beliefs may specify the probabilities of different outcomes for each action or merely identify some range of possible outcomes for each action. The conditions corresponding to holding each of these three types of beliefs are usually referred to as certainty, risk, and uncertainty, respectively. Probabilistic beliefs are assumed not to violate the usual axioms of probability theory.¹⁵ Each outcome is entirely a consequence of chosen actions and the existing state of the environment, implying that nondeterministic beliefs arise from an actor’s lack of knowledge about the environment or the choices of other actors.

(2) Actors have preferences that place the relative desirability of all outcomes in an unambiguous rank order. In other words, the usual requirements of a mathematical strict order, completeness/

¹³ Although it is not too uncommon for theorists to refer to “preferences” over actions, this usage is confusing, since it fails to differentiate between choices and the basis for those choices.

¹⁴ The three standard works credited with providing the formal foundations for the rational optimization model are Ramsey 1931; Von Neumann and Morgenstern 1944; and Savage 1953, though Ramsey has relatively greater influence among philosophers, and Von Neumann and Morgenstern among economists.

¹⁵ This quality is referred to as coherence in De Finetti 1980, 62-63. It differs from the epistemological concept of coherence discussed in chapter 3.

connectedness, asymmetry, and transitivity, are satisfied by the preferred-to relationship.¹⁶ Preferences are representable by a utility function that assigns a number to each possible outcome, where such a number represents the magnitude of the actor's desire for the outcome.¹⁷

(3) Actors will optimize across actions given preferences and beliefs. When they have deterministic beliefs about the consequences resulting from each action, they will choose the action believed to lead to the outcome with the highest utility. When they have probabilistic beliefs, they will choose actions that maximize expected utility, i.e., the sum of the utility of each possible outcome weighted by its perceived probability. When they have nondeterministic, nonprobabilistic beliefs, they will choose actions that exhibit dominance over all other actions, that are believed to provide at least as much utility as all other actions under all possible states of the environment, provided such actions exist.¹⁸

By itself, the rational optimization model cannot be used to make predictions about actions. While the first two components of the assumption essentially require that preferences and beliefs be compatible with an optimization procedure, they do not specify their content, leaving this exogenous to the resulting model. While there is broad uniformity within the rational choice approach in assumptions about decision making, there is more diversity in assumptions about the types of preferences and beliefs actors will have. On the other hand, a very large percentage of rational choice theories incorporates certain common types of assumptions about preferences and beliefs.

In most rational choice theories, beliefs are based on what can be called the *information assumption*. It posits that beliefs derive solely from observations of the environment and propositions that can be

¹⁶ The requirement of asymmetry is sometimes replaced with equivalent requirements of irreflexivity and acyclicity. By implication, the usual requirements of a weak order, i.e., completeness/connectedness, reflexivity, antisymmetry, and transitivity, are thereby met for the "at least as preferable" relationship.

¹⁷ Such cardinal utility functions are equal-interval measures of desirability, which are necessary if a weighted sum of the utility of multiple outcomes, such as expected utility, will itself have the required characteristics of a preference relationship. The main uses of non-cardinal or ordinal utility can be found in cases in which the outcomes from each possible action are certain and do not involve sequences of states, hence such aggregation or cumulation is unnecessary. Indifference curves, for instance, represent ordinal rather than cardinal utility.

¹⁸ The definition of *dominance* provided here is that for weak dominance, which adopted by most versions of the independence assumption, and is in turn included in most specifications of the rational optimization assumption. Strict dominance requires that an actor believe that an action provides more utility than all other actions in all possible states of the environment. Whether dominance is required to be strict in order to ensure the choice of a particular action is largely irrelevant for applications of rational choice assumptions to real world phenomena. Preferences, unlike choices, can plausibly be assumed to exhibit fairly fine discrimination (though not infinitely so) over differences in outcomes. This in turn reduces to virtually zero probability the states in which an actor will be completely indifferent between two outcomes.

inferred from such observations. Observability in turn is a function of an actor's location, material resources, and other characteristics of the environment, rather than of his, her, or its own mental characteristics. Nonprobabilistic beliefs are updated in light of observations through logical inference. Where beliefs are probabilistic, as is typical in models of incomplete information, it is usually held that an objective probability distribution for the relevant variable is known to each actor and that beliefs are updated through Bayesian inference. This implies that any difference in beliefs between actors must stem from differences in past observations. Actors are usually assigned either deterministic or probabilistic beliefs about their environment, which allows them to always calculate an optimal action under conditions involving unilateral action. On the other hand, they are rarely assigned deterministic or probabilistic beliefs that directly specify the actions of other actors. This leaves dominance as the main criterion for calculating optimality under conditions of strategic interaction, where outcomes depend on the simultaneous or mutually unobservable actions of multiple actors. Given the wide range of conditions under which no dominant action exists, models of strategic interaction tend to focus on identifying jointly optimal equilibria, profiles of strategies over actions for some group such that each member's strategy is optimal given the strategy of the other members.

The tendency for rational choice theorists to apply different standards for beliefs about an environment and other actors reflects the view that the latter ought to be consistent with actors applying the rational optimization assumption to one another.¹⁹ Indeed, a typical addition to the information assumption for models of strategic interaction is the assumption of common knowledge of rationality.²⁰ This is typically taken to mean that actors know that all other actors are rational optimizers, that all other actors know this, that all other actors know that all other actors know this, and so forth. Common knowledge allows actors to form beliefs about each others' actions through iterated dominance calculations, in which actors rule out all present and future actions of others that never provide maximum utility, regardless of the state of the environment. Another kind of common knowledge assumption is usually included in rational choice models focusing on action over time, though this is rarely mentioned explicitly. This assumption states that actors know that their own future actions will be based upon rational optimization, that their future selves will be aware of this for all selves after them, and so forth.

Assumptions about preferences, unlike those about beliefs, fall into separate broad categories that nonetheless share certain major

¹⁹ For an attempt to reconcile strategic interaction with probabilistic beliefs by actors directly pertaining to each other's future actions, see Skyrms 1992 and 1998. In Skyrms's model, these beliefs are shaped through a process of iterated deliberation between actors which is itself strategic.

²⁰ For a discussion of common knowledge of rationality, see for instance the symposium in the *Journal of Economic Perspectives* 6, 4 (fall 1992).

characteristics. First, for each actor utility reflects the quantity of a unidimensional, self-regarding maximand. In other words, all actors will maximize their own endowment of a single good. This does not mean that actors will never care about other goods, but such concerns will depend on beliefs linking the other goods to an increase in the maximand and will not be reflected directly in an actor's utility function. Only the one good represented in a utility function is valued intrinsically, for its own sake, while other goods may be valued only extrinsically or instrumentally, as a means to an end.²¹ Furthermore, the maximand is isomorphic among all actors. In other words, although the utility functions of different actors are in conflict with one another (each actor cares about his, her, or its endowment of the good, not anybody else's), they generate identical preferences for actors vis-à-vis their own relationship to the good. Where the outcome of an action is seen to extend over more than one future period, utility is calculated as the geometrically discounted cumulation of the quantity in all future periods.

Each category of preference assumptions is defined by its particular actor and maximand. Each category of preference assumptions, combined with the rational optimization assumption and the information assumption, generates a fully fleshed model of action for its designated actor. Each model in turn belongs to a major grand theory tradition in the social sciences. These include theories of market competition, in which actors are firms and the maximand is profit; theories of electoral competition, in which actors are political parties and the maximand is votes; and neorealist theories of international relations, where actors are states and the maximand is power. Most importantly, there is a general category that cuts across various rational choice traditions in which actors are individuals and the maximand is wealth or material consumption. These include theories of consumer choice and voting, which complement those of market and electoral competition; economic theories of labor markets and intrafirm relations; and political theories of collective action.

²¹ The distinction between intrinsic and extrinsic motivation is well-established in social psychology. See, for instance, Kruglanski 1975. In sociology, extrinsic preferences are usually referred to as instrumental. Hechter discusses immanent and instrumental preferences (1993, 216), while Lindenberg makes the similar distinction between universal and instrumental preferences (1990, 741). Both seem to have been influenced by Weber's distinction between *wertrational* and *zweckrational*, with the latter generally translated as "instrumental rationality." Among philosophers, Baier distinguishes between ultimate and preliminary ends (1958, 266-76). A related distinction often made by philosophers is that between *desire simpliciter* and *prima facie desire*. The latter describes desires that are inherent to objects themselves, rather being linked to properties believed to be possessed by them (Petit 1991, 151-59). In economics, the characteristics approach to consumer demand theory has sought to link demand to preferences over the characteristics of the products within consumption bundles rather than over the products themselves. This approach is associated with Gorman and Lancaster. See for instance Gorman 1956; 1980 and Lancaster 1966; 1971.

The Strengths of Conventional Rational Choice

I refer to these categories as forms of *conventional rational choice*. This may draw objections from those who claim that the rational choice approach is based solely on rational optimization and that no assumptions are made about preferences and beliefs. Nonetheless, whatever the virtues of this narrow view of rationality,²² assumptions about preferences and beliefs are required to make predictions about action. The alternative of inferring preferences and beliefs after the fact, from the actions being explained, makes the resulting theories tautological.²³ Furthermore, the majority of rational choice theories that are applied to analyze specific empirical settings adopt some variety of the conventional assumptions described earlier.

One of the main advantages of conventional rational choice models is their *generality*. In other words, a single set of assumptions pertaining to each type of actor is compatible with any set of structural assumptions about the environmental setting in which the actor is present. Although this will certainly leave room for disagreement about the assumptions of specific theories, disagreement will be about the nature of the environment within the scope conditions set by the theory, not about the nature of the actors. This common deductive base provides a commensurability to rational choice theories, and sets them off from other theories that do not share their assumptions. By reducing the area for disagreement, this increases the amalgability of different theories into a single coherent body. Furthermore, it gives theories within the approach an a priori nature that protects them from accusations that they were constructed to “fit the facts” after outcomes were observed. Finally, it provides a base that can be used to generate midrange theories and hypotheses, even in analyzing settings where few systematic empirical data exist.

Another advantage of rational choice models is their *parsimony*. The information assumption, the common knowledge of rationality assumption, and the assumption of isomorphic and self-regarding utility function, when combined with the rational optimization model, allow rational choice theories to treat variations in choices among actors and by an actor over time as entirely a function of their structural position. To begin with, preferences and beliefs are seen as the only relevant attitudinal variables for determining action. Furthermore,

²² Rational choice models that leave preferences and beliefs exogenous are often referred to as “thin” models, see Elster 1983b, 1-2 and Ferejohn 1991, 282. Ferejohn uses the term *thick rationality* to refer to conventional rational choice, while Elster, in the same spirit, uses the term *broad rationality*. This common allusion arises from their basis in John Rawls’s earlier “thin theory of the good.” However, there is no terminological consensus on this usage. For instance, Michael Taylor uses the term *thick* to refer to egoistic rational actors, the difference with the other authors seeming to be that Taylor applies the terms to describe individuals, not theories (though he cites Elster in doing so). Moreover, the term *thick* is often associated in social science with Clifford Geertz’s concept of “thick description,” emphasizes local uniqueness rather than universality. See Rawls 1971, 396; Geertz 1974, chap. 1; Taylor 1989, 120; Taylor, 1988, intro., 66.

²³ Wildavsky 1994; Hirschman 1986.

inference processes are uniformly based upon the axioms of formal logic and probability theory, which means that variations in beliefs about the environment are caused by variations in access to observable information. Utility functions are also uniform, which means that variations in preferences over outcomes are caused by variations in the effects of each outcome on an actor's endowment of the maximand. Finally, actor beliefs about the preferences and beliefs of other actors are determined by their beliefs about each other actor's structural position, since the inference processes, utility functions, and decision-making processes of all actors are taken to be uniform or isomorphic. Together, this implies that mental states need not be taken into consideration as independent variables because they merely intervene in a predictable manner between past and present states of environment and action.

The virtues of parsimony tend to be reinforced by generality. Generality ensures that different models of action need not be applied to different types of environments. This means that actor assumptions remain unified rather than splintering into a complicated mix of conditionals when theories based on the conventional rational choice model are combined. This in turn means that the parsimony of mid-range theories is better preserved when scope conditions are loosened and these theories are combined into a general covering law that can be used to predict actions in all environments.²⁴

In addition to exhibiting generality and parsimony, conventional rational choice assumptions have displayed predictive advantages as well. The assumptions have been used to produce a wide variety of *decisive* theories, theories whose predictions regarding measurable real world phenomena rule out a much larger set of outcomes than what is already generally accepted to be impossible or unlikely.²⁵ The narrowness of conventional rational choice actor assumptions ensures that the set of actions deemed possible for any actor is often fairly small given a reasonably complete set of structural assumptions. Of course, this implies that the decisiveness of rational choice theories depends on structural as well as actor assumptions. The nature of environments is the great unspecified area in the rational choice approach, and it is usually treated in an ad hoc manner in conventional rational choice theories. However, there are sufficient limits on the plausible ways in which social scientists can model environments to ensure that the resulting theories will have some real analytical bite. For instance, it is difficult to imagine a rational choice theory based upon

²⁴ The notion of covering laws was first put forward in Hempel and Oppenheim 1948. The definitive discussion is in Hempel 1966.

²⁵ Decisiveness can be seen as a hybrid of the concepts of falsifiability and determinacy. The trouble with these two concepts is that each is defined in either/or terms; falsifiability as the existence of even one conceivable set of empirical observations that could confirm a theory, determinacy as the existence of only one conceivable set that would not disconfirm it. Decisiveness would allow for a partial ordering, i.e., one theory could be seen as more decisive than another if the set of empirical observations it rules out is a proper superset of those ruled out by the other.

plausible structural assumptions in which vote-maximizing political parties choose positions that are opposed by virtually all voters. It is also difficult to imagine a model of collective political violence in which self-interested wealth-maximizing individuals will sacrifice their lives for a political cause.²⁶

Another important factor in decisiveness is the extent to which the independent variables are amenable to reliable measurement. While the rational optimization model focuses on mental variables such as decision-making processes, preferences, and beliefs, conventional rational choice assumptions effectively do away with the need to measure these variables directly. Given the frequent difficulties associated with developing reliable indicators with reasonable face validity for mental variables, this view increases the ease with which conventional rational choice theories can be used to make decisive predictions vis-à-vis other theories that require measurement of mental variables. Furthermore, because of the compatibility of conventional rational choice actor assumptions with virtually all types of structural assumptions, conventional rational choice theories make use of similar structural variables to those found in structural theories, such as wealth distribution, technological development, military strength, and so on, and they can make use of the same indicators. At the same time, they explicitly and systematically specify a micro-level process through which a set of structural conditions leads to particular outcomes and not others.

In its combination of generality, parsimony, and decisiveness, conventional rational choice is clearly unmatched by any other set of widely used assumptions in social science. This would not be of much benefit if the predictions made by conventional rational choice theories had been universally disconfirmed by empirical evidence. While it is on this criterion of empirical accuracy that the rational choice approach has encountered its greatest criticism, it is also true that, on a wide range of issues, its theories have been accepted by a large segment of the social science community as being consistent with empirical evidence. Whether this acceptance is the product of rigorous testing against non-rational-choice theories is a hotly debated subject,²⁷ but even a mixed record makes it difficult to dismiss the approach as inferior to others overall, given its strengths with respect to other criteria.

The perceived level of confirmation for conventional rational choice theories is, not suprisingly, the most widespread in economics, where the approach originated and remains dominant. Economic theories based upon conventional assumptions have long been used as the basis for both corporate economic forecasting, a use that presumably would not have survived if the predictions had been shown to differ greatly from actual measured outcomes. While such use in other disciplines

²⁶ For a discussion of the role of plausibility in the adoption of structural assumptions and of the possibility for making such assumptions less *ad hoc*, see the beginning of chapter 2.

²⁷ See Green and Shapiro 1994 and Johnson 1991, 114-19.

remains relatively rare, there has been for a long time an anticipation among proponents that this will occur.²⁸

Hence, the rational choice approach has been hailed by many as the prototype for a more rigorous, deductive and cumulable approach to political analysis. It has been called a “unified framework for understanding all human behavior,”²⁹ the “most rigorous and the most general theory of social action that has been advanced in this century,”³⁰ and the “universal grammar of social science.”³¹ Proponents contrast its “hypo-deductive” nature with the mere “set of concepts and definitions” that comprise the functional and cultural approaches that have historically been its main methodological challengers.³² Others stress how rational choice can be applied to explain both micro (actor-level)³³ and macro (environmental-level)³⁴ phenomena, allowing a diverse set of insights to be inferred from a simple set of assumptions.³⁵

For these reasons, as well for others pertaining to the contemporary intellectual climate in the social sciences and in society as a whole,³⁶ the rational choice approach has enjoyed a steady climb in prominence,³⁷

²⁸ A pioneering early example of the use of rational choice assumptions for forecasting purposes in political science is Bueno de Mesquita, Newman, and Rabushka 1985.

²⁹ Becker 1976a, 14. For a similar comment, see Lalman, Oppenheimer, and Swistak 1993, 98.

³⁰ Rogowski 1997, 298, 304. See also Rogowski 1993, 443.

³¹ Hirshleifer 1985, 53.

³² Harsanyi 1969, 514. For similar views, see Mitchell 1969; Holt and Turner 1975; and Gray 1987.

³³ Riker 1990, 174.

³⁴ Coleman 1986, 360-63.

³⁵ Friedman and Hechter 1990, 214-15; Harsanyi 1969, 515; Rogowski 1997, 300.

³⁶ Among other things, the events and prevailing attitudes of the 1960s brought into disrepute any theory that seemed to imply that a basic normative consensus existed in any society or that differences in social outcomes are caused by cultural differences rather than differences in power. In addition, American social scientists were in large part imbued with a desire to emulate the hard sciences, with a corresponding proquantification ideology, and they could not object very strongly to methods adapted from the most mathematical of social sciences, economics. See Rogowski 1997, 304-6; Mansbridge 1990c, 9-11; and Alexander 1987, 114-18 for short discussions of such issues.

³⁷ This is true of political science in particular. One indication is the number of accepted articles in the *American Political Science Review* categorized as “Formal Theory and Methodology,” which has increased by over 60 percent between 1985 and 1991. Since the rational choice approach dominates formal theory in political science, it is fair to interpret this as an indication of the increasing popularity of the approach. See Patterson, Bruce, and Crone 1991. In another measure, it was found to occupy about a quarter of all articles published in the *American Political Science Review* as well as the *American Journal of Political Science*. See Dow and Munger 1990, 607. For more on this increase, see Lalman, Oppenheimer, and Swistak 1993, 77.

a trend that has come to be known as “economic imperialism.”³⁸

The Weaknesses of Conventional Rational Choice

This rise and the sometimes grandiose claims of the champions of rational choice have inevitably led many others to examine the approach’s weaknesses.³⁹ Specifically, criticisms of conventional rational choice have centered both on the unrealistic nature of its assumptions and on its inability to predict a large number of important human phenomena.

Conventional rational choice assumes that utility functions are uni-dimensional (hence static), self-regarding, and isomorphic. Individuals in particular are assumed to maximize their own wealth. However, public opinion surveys, experiments, and ethnographies provide ample evidence suggesting individual preferences differ quite widely from this “ideal” of mono-maximization, incorporating such factors as altruism, expressive desires, and a sense of justice.⁴⁰ Such studies moreover show a tendency for preferences to vary widely between individuals and to change significantly over time across populations.⁴¹ Although it is conceivable that this empirical evidence reflects an interaction between constant intrinsic utility and a changing environment, no one has been able to plausibly show how the types of preferences uncovered by these studies can be viewed as instrumental in maximizing the conventional utility functions.

Likewise, conventional rational choice assumes that beliefs arise purely from observable characteristics of the environment and propositions that can logically be deduced from them. However, this contradicts practically the entire empirical literature in social psychology, particularly that on decision making, attribution, motivation, and social cognition, much of which is devoted to showing that quite normal individuals are capable of holding beliefs that are not logically derived from and are even contrary to observable evidence. This empirical literature also shows how decision-making processes diverge widely from cool optimization, showing that a wide range of emotional factors come

³⁸ See Swedberg 1990c, 13-33 and Swedberg 1990b; as well as Baron and Hannan 1995.

³⁹ Broad general collections of such critiques include Hogarth and Reder 1986; Cook and Levi 1990; Nichols and Wright 1990; Monroe 1991; Coleman and Fararo 1992; Zey 1990; Ferber and Nelson 1993; Friedman 1996; a special issue of *Political Psychology* 16, 1 (March 1991); and a symposium in the *Journal of Economic Literature* 36, 1 (March 1998).

⁴⁰ Sears and Funk 1990b; Sears and Funk 1990a; Marwell and Ames 1979; Marwell and Ames 1981; Coughlin 1991a; Fiske 1991, part 4; Monroe 1996, part 2.

⁴¹ Among the most notable fairly recent works within a large literature are Almond and Verba 1980 and Inglehart 1990.

into play and individuals will employ a wide range of heuristics, including those that exhibit a great deal of bias.⁴²

Critics have also argued that both preferences and beliefs can be the results as well as the causes of actions,⁴³ and that understanding the mutuality of this relationship is essential to understanding political, social and economic behavior.⁴⁴ Emphasis on the endogenous nature of preference and belief change characterizes emerging approaches in a variety of subfields, including the “new institutionalist” approach to organizations,⁴⁵ the “new social movements” approach to collective action,⁴⁶ and the “reflectionist” approach to international relations.⁴⁷ In response to these critics, defenders have turned to pragmatic arguments that conventional rational choice assumptions, regardless of their verisimilitude, can be justified as analytical tools because they are of great value in generating predictions about actions.⁴⁸ According to such “as if” arguments, actors need not actually engage in conscious optimization, as long as the choices they make are similar to those they would make if they were doing so. As if arguments are bolstered by a priori justifications that point to the survival value of the designated maximands. The most popular takes the form of quasi-natural selection argument replicated within each of the rational choice grand theory traditions, which proceeds along the following lines: politicians need votes to remain politicians, firms need profits to remain firms, and sovereign states need military power to remain sovereign states. Those who fail to maximize the key unidimensional good will no longer exist, hence we can assume that all who remain maximize.⁴⁹

Such arguments are essentially functional, which is rather ironic given the polemics that are often launched by the rational choice camp

⁴² Because evidence for nonlogical or illogical beliefs and for nonoptimizing decision-making processes is found in practically every area of empirical social psychology, it is difficult to provide any definitive set of citations. Surveys of decision theory are a useful place to start, since they are the most likely to interpret their results in terms of their implications for the conventional rational choice model. See citations in the section on decision-making assumptions and bounded rationality in chapter 2. For a useful survey particularly aimed at economists, see Rabin 1998.

⁴³ Aaron 1994, 6-8; March and Olsen 1989, 163; Taylor 1989, 116; Barry 1970, 92-96; Hirschman 1965, 390-93.

⁴⁴ Rhoads 1990; Wilson 1980, editor’s conclusion.

⁴⁵ March and Olsen 1989; Powell and DiMaggio 1991.

⁴⁶ Melucci 1989; Larana, Johnston, and Gusfield 1994.

⁴⁷ For a review, see Keohane 1988. See also Lapid and Kratchowil 1995.

⁴⁸ Originating in Friedman 1953.

⁴⁹ For discussions of these imperatives in each category, see Mayhew 1974, chap. 1, esp. pp. 16-7 and Downs 1957, chap. 2, esp. pp. 30-31 for politicians and parties; Alchian 1950 for firms; and Waltz 1979, chap. 5, esp. pp. 88-93 for states. For a general defense of such justifications, see Ferejohn and Satz 1994. For an attack on their verisimilitude, see Green and Shapiro 1994, chap. 3.

against social science functionalism.⁵⁰ There is no clear argument, other than from imitation, for how non-rational actors can adapt to pressures in the environment to behave in a rational fashion. Nor, for corporate actors based on aggregate units such as parties, firms and states, is there an explanation for how the interests of the varying individuals who comprise such units are reconciled in a way that allows the actor to behave in a maximizing fashion.

In each of these actor categories, moreover, the pressure of the environment will often be soft enough to leave a great deal of slack. Actors are seldom living on the edge of survival and need not maximize once they get beyond some reasonably achievable threshold. Hence plausible arguments can be made that political parties will pursue policy objectives as well as votes, firms will pursue market share as well as profits, and sovereign states will pursue wealth as well as military power. Natural selection arguments are even more difficult to make for the assumption that individuals maximize their wealth, since the survival threshold for wealth is so easily achieved in most contemporary societies as to make such an argument implausible.⁵¹ Moreover, there may be conditions under which acting to maximize personal wealth is self-defeating. If individuals can perceive the nature of each others' utility function, it is quite possible that those individuals whose utility functions are known to include non-material goods can elicit better material treatment from others.⁵²

As-if arguments place prediction above explanation on the scientific set of priorities, and also view choices as the important dependent variables in action, rather than the processes by means of which actors arrive at such choices, priorities that are quite different from those explicitly held by ethnographers on the one hand and decision-theorists on the other. However, even if prediction of choice is given the top priority, critics point out that conventional rational choice theories are flawed not only because their assumptions are unrealistic⁵³ but because they fail to predict a wide range of behavior.⁵⁴ In fact, there is a wide range of analysis in which theories based upon conventional assumptions have been indecisive or disconfirmed by the evidence.⁵⁵

⁵⁰ For comments on the links between evolutionary and functional arguments in social science, see Stinchcombe 1968, 85-99 and Thompson, Ellis, and Wildavsky 1990, 117-18, 201. For analysis of the use of functionalism in evolutionary biology, see Dupre 1987.

⁵¹ Hence the only prominent example that I know of where survival arguments have been plausibly made to support assumptions of individual economic welfare maximization (albeit extremely risk-averse) applies to subsistence agricultural societies. See Scott 1976, especially chapter 2.

⁵² See Frank 1988, chap. 5 and 6.

⁵³ Moe 1979, for an effective rebuttal to Friedman that focuses in on crucial differences between the use of such assumptions in the natural sciences and in economics.

⁵⁴ Simon 1979; 1986a.

⁵⁵ The most systematic attack on the predictive power of conventional rational choice is Green and Shapiro 1994.

Even though decisiveness is seen as a relative strength of conventional rational choice, there remains a wide range of structural assumptions under which the model cannot provide decisive predictions. The most prominent example of such indecisiveness occurs in cases involving strategic interaction. Even if theorists seek only to identify an equilibrium profile of strategies over actions without predicting whether such equilibria will be reached, many types of structural assumptions will generate a large set of multiple equilibria or no equilibrium at all. This tendency is pointed out by the well-known “folk theorem” in noncooperative game theory, which shows that in most types of repeated interactions between actors in which the endpoint is nonexistent or impossible to estimate, just about any set of strategies over actions can be sustained as an equilibrium.⁵⁶ Likewise, even interactions that take place only once will often generate multiple equilibria when actor payoffs are highly interdependent. In many real-world environments, it is difficult to assume that such a profile of strategies exists for individuals with conventional utility functions, given the extent to which the relative effect of different actions on every individual’s wealth is dependent on the actions of every other individual. Even if we disregard the strategies of other actors, other reasons for indecisiveness can be found in the immense complexities of the physical world and the difficulty of forming beliefs about causality from observable information and inference that are precise enough to isolate a single optimal action.⁵⁷

In real life, actors clearly make decisions based on beliefs about their environment that cannot be inferred solely from information, but draw instead from ideology and culture. Such beliefs are not antithetical to rationality. Indeed, in some cases they are essential to isolating one *action* from a myriad of possibilities and therefore *necessary* for rational decision making, something that has been noted by a wide range of thinkers from various social science disciplines.⁵⁸

While an increasing number of theories attempt to incorporate culture directly, rational choice theorists have more often added

⁵⁶ Fudenberg and Maskin 1986.

⁵⁷ In fact, it can reasonably be argued that it is impossible for a theory based upon conventional rational choice information assumptions to make decisive predictions of any kind without additional *ad hoc* assumptions about how actors form beliefs. One of contemporary philosophy of science’s basic points of agreement has been that causal beliefs about the world cannot be generated by observation and inference alone, that there must be some set of pre-existing organizing apparatus to transform these into theories. Even then, there will always be multiple theories that fit any set of observations, as exemplified by the “new problem of induction”; see Goodman [1957] 1983. Hence any structural assumption that an actor can “observe” a particular causal relationship between actions and outcomes would be viewed as either unsound or containing implicit assumptions about a priori beliefs.

⁵⁸ D’Andrade 1993, chap. 8; Kingdon 1993; Kreps 1990; Grafstein 1992, chap. 5, sec. 3; Earl 1990, sec. 1; Elster 1990, sec. 3; Boudon 1989, chap. 1; Vanberg and Buchanan 1994; Hindess 1988, chap. 5; Hollis 1987, chap. 9; Gellner 1985; Douglas and Wildavsky 1982, chap. 1-4; North 1981, chap. 5, sec. 3 and North 1990, chap. 3, sec. 3; Balkin 1998, chap. 1.

ad hoc assumptions about beliefs and preferences on top of the conventional ones, without explaining their source.⁵⁹ The addition of ad hoc assumptions, while permissible as a theory-construction device, removes much of the coherency and a priori nature from conventional rational choice assumptions about actors.

There is also a large and growing body of influential opinion that asserts that the conventional rational choice assumptions, particularly those about preferences, lead to inaccurate predictions about behavior.⁶⁰ These criticisms extend across the entire range of conventional rational choice traditions and are backed up by a diverse collection of evidence about general patterns of behavior.⁶¹ More specific criticisms focus on paradoxes of both formal and informal participation in collective action despite the apparent lack of significant personal material incentives to do so. A huge body of work, much of it by rational choice theorists, has shown that it is necessary to modify conventional rational choice assumptions in order to explain why individuals vote in democracies⁶² and why they participate in social and political movements.⁶³ A prominent literature in political philosophy attacks the conventional assumptions for generating inadequate explanations for the functioning of democracies as well as for their effects on normative democratic theory.⁶⁴ Similar criticisms have arisen in the field of international politics, where conventional assumptions about preferences and beliefs have been found to generate "empirical anomalies,"⁶⁵ and in the study of domestic political competition, where theories assuming that parties seek solely stay in power and ignoring internalized ideology have been unable to explain a wide range of policy outcomes.⁶⁶ Even among theories

⁵⁹ Simon skewers a number of prominent rational choice theories, including much of voting theory, for just this reason. See Simon 1985 and Simon 1986b.

⁶⁰ A huge number of articles and books have been written addressing this issue. They include Scitovsky 1976; Sen 1977; March 1978; Hirschman 1985; Etzioni 1988a; Wolfe 1989; Mansbridge 1990; Lane 1991; Lewin 1991; Hechter, Nadel, and Michod 1993; Wilson 1993; Schwartz 1994; Aaron, Mann, and Taylor 1994; Wuthnow 1995; Bowles, "Endogenous Preferences: The Cultural Consequences of Markets and Other Economic Institutions" *Journal of Economic Literature* 36, 1 (March, 1998), 75-111.

⁶¹ For general reviews of the evidence, see Etzioni 1988a, chap. 4; Lane 1991, chap. 17, 23; Mansbridge 1990c; Juster 1991; Lewin 1991, chap. 2-4; Schwartz 1993.

⁶² Green and Shapiro 1994, chap. 4; Aldrich 1999; Brennan and Lomasky 1993, chap. 2-4; Uhlaner 1993; Glazer 1993; Muller 1989, chap. 18; Margolis 1982, chap. 7; Hinich 1981; Fiorina 1976; Ferejohn and Fiorina 1974; Barzel and Silberberg 1973; Silver 1973; Riker and Ordeshook 1968; Downs 1957, chap. 14.

⁶³ Green and Shapiro 1994, chap. 5; Chong 1991, chap. 1; Opp 1990, chap. 2; Muller and Opp 1986; Mason 1984; Buchanan 1979; Salert 1976, chap. 2; Silver 1974; Tullock 1971.

⁶⁴ For two major works along these lines, see Mansbridge 1980 and Barber 1984. See also Brennan 1989; Petracca 1991 and Scalia 1991, as well as Barber 1993 and Mansbridge 1993.

⁶⁵ Goldstein and Keohane 1993, intro., 6. See Lumsdaine 1993 and McElroy 1993.

⁶⁶ See numerous cites in chapter 4.

of the firm, where conventional rational choice assumptions originated, patterns of investment are often difficult to understand unless profit maximization is seen to take a back seat to other goals.⁶⁷ The range of unexplainable behaviors is extremely large, and extends to every significant type of actor found in conventional rational choice theories and virtually every arena of action. In many environments, conventionally motivated actors would be predicted to act in a ludicrous manner, as Sen points out in this heartwarming scenario: “Where is the railway station?” he asks me. ‘There,’ I say, pointing at the post office, ‘and would you please post this letter for me on the way?’ ‘Yes,’ he says, determined to open the envelope and check whether it contains something valuable.”⁶⁸

Perhaps because of these explanatory weaknesses, theory building within conventional rational choice has gravitated toward increasingly complex and formal mathematical models of action in those realms, particularly formal economic and political institutions, where conventional assumptions are at least somewhat reasonable approximations of reality. By not accounting for the rich variety of human motivations and cognitions found in the world and focusing on predictable environments (particularly stable formal organizations), the conventional rational choice literature has directed research away from arenas where ideology, culture, identity, and related factors have a significant effect on actions.⁶⁹

This has had a particularly constricting effect on the study of comparative development.⁷⁰ Although the conventional rational choice approach has been applied quite productively to Third World studies,⁷¹ this literature focuses primarily on bargaining and conflict among actors with prespecified interests and clear beliefs about institutional constraints rather than on the forces that create these interests⁷² and institutions.⁷³ While the former are clearly important areas of analysis, neglect of other areas means ignoring of concerns that have traditionally been at the center of development theory, particularly comparative and long-term issues such as variations in the nature of social institutions across societies and the effect of economic development on political behavior.

⁶⁷ Thurow 1991.

⁶⁸ Sen 1977, 332.

⁶⁹ For a discussion of the effects of rational choice assumptions on narrowing the topics that are open for analysis, see Hirsch, Michaels, and Friedman 1987, 39-56.

⁷⁰ Pye and Pye provide a disparaging, but not unrepresentative, evaluation of conventional rational choice formal theory by development specialists when they refer to it as “convoluted ways of elucidating the obvious by mathematical formulas.” See Pye and Pye 1985, 10.

⁷¹ By Ames, Bates, Geddes, Laitin, Levi, Popkin, Rogowski and Shirk, to name but a few in political science, as well as by numerous scholars in the field of development economics.

⁷² Evans and Stephens 1988-89, 732-33. See also Evans and Stephens 1988.

⁷³ Johnson and Keehn 1994, 18-19.

Such criticisms of conventional rational choice have built up to a grand chorus in recent years.⁷⁴ and generated a growing literature that seeks to alter the conventional assumptions.⁷⁵ However, attempts to reform conventional rational choice theory have encountered a number of obstacles. In particular, would-be reformers have faced the problem of changing assumptions to address empirical weaknesses without sacrificing the strengths of the conventional model. Although it has been relatively easy to find alternative sets of assumptions that can explain a particular set of phenomena better than conventional rational choice, it has been more difficult to generalize such assumptions to larger arenas without robbing the approach of its ability to make decisive predictions.⁷⁶ Because of this, the use of unconventional assumptions has been characterized as adventures into “waters that are treacherous” and “very murky.”⁷⁷

⁷⁴ There has been a cottage industry of books criticizing the usefulness of conventional rational choice assumptions even within its original domain of economics. These include direly entitled volumes such as Bell and Kristol 1981; Balough 1982; Wilber and Jameson 1983; Eichner 1983; Wiles and Routh 1984; Kuttner 1984; Arnt 1984; Mirowski 1989; Rosenberg 1992; Brockway 1993; Ormerod 1994; Heilbroner and Milberg 1996. In addition, a number of recent presidents of the American Economic Association (Leontieff, Gordon and Debreu, for instance) have taken to questioning the solidity of the methodological foundations of economic theory in their presidential addresses. A poll of economists taken several years ago showed that two-thirds felt that economics had lost its moorings. See Guzzardi 1978, cited in Maital 1982, 17. Although much work since then has been devoted to addressing perceived shortcomings, it has not significantly altered the widespread perception both within and without the discipline that the approach as a whole is estranged from reality. For instance, see the fictional dialog between a management guru and an economist in *The Economist* 325, 7720 (December 21, 1991-January 3, 1992), 89-91.

⁷⁵ An important manifestation of discontent with conventional rational choice is the effort by Etzioni and others to found a counter-hegemonic “socio-economic” approach. This has led to the creation of the Society for the Advancement of Socio-Economics, the *Journal of Socio-Economics* as well as a number of books, e.g., Etzioni 1988a; Etzioni and Lawrence 1991 and Coughlin 1991b. Socio-Economics has since formed strong links with the existing approaches of behavioral economics and economic psychology, as manifested by the renaming the *Journal of Behavioral Economics* as the *Journal of Socio-Economics* in 1991 and the publication of articles by Etzioni on Socio-Economics in prominent edited collections on behavioral economics, economic psychology and in the *Journal of Economic Psychology*. The main difference between these labels is the emphasis that Etzioni puts on viewing socio-economics as a separate discipline from economics. See Etzioni 1991; 1988b; 1986.

⁷⁶ For an argument that this has been a rather futile exercise, leading to theoretical “degeneration,” see Smelser 1992b.

⁷⁷ See Coleman 1990, 292 and Hechter 1994, 320. Nonetheless, both Coleman and Hechter have been involved in pioneering efforts to develop new approaches to the issue of preferences. See Coleman 1990, chap. 13 and Hechter, Jasso, and Ranger-Moore 1999. To add to the turbulence of this analogy, the conventional rational choice assumptions of economics have themselves been characterized as “dangerous currents.” See Thurow 1983.

The Chapter Structure of This Book

This book attempts to venture into such waters, but it also tries to steer clear of some of the hazards involved. Chapter 2 surveys various alternatives to conventional rational choice. The first section of the chapter focuses on the effects of adding general structural assumptions to the conventional actor assumptions. The next few sections focus on ways to alter the conventional actor assumptions. Alternative decision making models include non-rational models based on norms; non-optimizing rational choice models of bounded rationality and satisficing, reinforcement, and non-expected utility, as well as normative philosophical models. Alternative general deductive models of preference include isomorphic utility functions, time preferences, consumption-based preference, and social exchange. I conclude that while each approach has certain advantages over conventional rational choice, none addresses the conventional approach's main explanatory shortcomings while retaining its generality.

Chapter 3 presents a new model of preference and belief formation, using a formalized concept ("coherence") that draws upon on the psychological concept of dissonance and the economic concept of regret. The key assumption will be that individuals will, subject to certain simple constraints, repeatedly adjust their preferences and beliefs to minimize cumulative coherence, which is the subjective expected difference between the utility of the a posteriori best possible outcome and that of the outcome generated by actions chosen up to that point. This expected difference will be positive when the actor is not certain about future outcomes and prefers particular outcomes over others.

I argue that this preference and belief model is consistent with the assumption of rational optimization, and combined with it significantly expands the explanatory range of the rational choice approach without sacrificing its strengths. The model is used to formally derive several theorems on how individual and group experiences generate preference and belief change over time, and these theorems are linked to a wide range of existing research in the social sciences. They cover social psychological phenomena such as bolstering, overjustification and reactance, as well such as wishful or unwishful thinking and "sour grapes" or "forbidden fruit." Moreover, they go beyond individual processes to predict the conditions for the formation of altruism within groups and the acceptance of particular cultural norms.

Chapters 4, 5, and 6 contain substantive applications of the model. Each chapter examines a different major issue in comparative development: the origin of economic ideology among elites in developing countries and its effects on policies, the origins of ethnic boundaries and their effect on collective action, and finally the relationship between structural change, political culture, and political violence. In each chapter, I argue that a theory derived from the coherence rational choice model either helps shed new explanatory light on important empirical phenomena or provides greater deductive depth to existing explanations.

Chapter 4 attempts to account for the origins of economic ideology among the leaders of ex-colonial countries, as well as the way in which

this ideology has affected their economic development policy choices. I first examine existing positive theories of economic policy formation, focusing in particular on their explanations of variations in levels of state economic intervention among different countries. I argue that existing theories of policy formation either do not attempt to explain such variations, or do so in a way that ignores the key role of ideology in determining the extent to which states will intervene.

I then present a positive theory of ideology formation, using the process of coherence to construct a link between political conflict and the internalization of opposing ideologies by members of conflicting groups. This theory is used to explain the tendency among indigenous elites that engage in anticolonial activities to internalize ideologies that emphasize the economic benefits of policies diametrically opposed to those of the colonial power. It will be posited that such internalization will have a coherence-enhancing effect on elites who choose to fight for independence rather than collaborate, since it will increase the perceived benefits that will result if independence is achieved and hence reduce the risk that the decision was mistaken.

These internalized ideologies have a systematic effect on the rational policy choices made by such elites in their roles as postcolonial state leaders, including the extent to which they attempt to exert state control over the market. In particular it causes states in former Western colonies to intervene more heavily in their markets than those in non-colonies, even after other possible influences are taken into account. However, this effect is predicted to decline over time, as an increasingly large percentage of elites will be from a generation that has not participated in anticolonial struggles. A statistical test is conducted, regressing key explanatory variables isolated by this theory, along with alternative explanatory variables (e.g., GDP, population, land resources, and year-by-year changes in the global political environment), against four different measures of state economic intervention.

Chapter 5 focuses on the formation of ethnic identity and its relationship with ethnic collective action. I review existing general positive theories of ethnic collective action, including those theories that view such action as an opportunistic behavior on the part of self-interested individuals and those that attempt to incorporate ethnic identity directly into individual preferences and beliefs. I assert that former theories either cannot explain the existence of collective action based on ethnic criteria or attribute such action to various ethnic “resources” that are not fully conceptualized or operationalized. The latter theories use assumptions of ethnic preferences and beliefs to explain ethnic collective action, but do not explain the origins of these preferences and beliefs nor variations that exist in their nature and strength. I argue that no existing positive theory attempts to predict the location of the boundaries within which ethnic collective action takes place, nor the timing of their formation.

I then present a theory of ethnic group formation, one that is based upon links between cooperative action and coherence-reducing

altruism. The theory is then applied to explain the formation of large-scale ethnic groups in developing countries, as well as the location of their boundaries. I first focus attention on an individual's formative experiences within societies which are just beginning to experience economic commercialization and large-scale political consolidation, hypothesizing that coherence-reducing processes related to cooperative action within a relatively stable and self-sufficient rural community create a sense of altruism towards other members of those relatively small communities. Later interactions within an urban metropole, however, lead to a broadening of the boundaries of rational cooperative action and the formation of larger groups. The location of these new boundaries are determined by an interaction between primordial altruistic ties of individuals to their local communities and their circumstantially shared interests with others in the economic and political environment, as well as by criteria of optimal size. In the long run, barring major changes in structural conditions, altruism will be redirected towards these new groups and large-scale ethnic identities will be formed.

A number of mini-case studies are presented to illustrate the theory, focusing on five of the most prominent cases of ethnicity "creation" that have occurred in the past century. These include the pan-Malay and pan-Igbo identity, the Luba-Kasai identity in Zaire, the Muhajir identity in Pakistan and the "local identity" in Hawai'i. In each case, the theory is used to explain why large-scale ethnic groups arose at a particular time in history and why ethnic cleavages formed around particular boundaries rather than others. While these case studies do not constitute a systematic test of the theory, they show the fruitfulness of the theory in making relatively accurate predictions across a wide range of historical circumstances.

Chapter 6 focuses on the relationship between socioeconomic change, political culture and civil violence. It begins by reviewing 19th and early 20th century theories of modernization that posited a linear movement from particularistic, collectivist "traditional communities" to impersonal "modern societies," as well as how they have been elaborated on by contemporary modernization theorists. I discuss various methodological and empirical critiques that have been directed at these theories, particularly allegations that the theories are unilinear, teleological and ethnocentric. I argue that not all modernization theories can accurately be described in those terms, and that recent theories in particular have broadened the narrow assumptions of their predecessors. However, in the process of doing so, so they have lost the common deductive basis that held the older theories together. I assert that such a deductive basis can only be restored if shared micro assumptions are brought into modernization theory.

I then present a theory, based on coherence model, that focuses on how changes in patterns of cooperative and conflictual interaction lead to changes in patterns of altruism, and how these in turn affect political behavior. Two types of change in interaction patterns are examined: the first, broadening, relates to the number of individuals with whom interactions take place. The second, fragmentation, relates

to the density of interactions with different groups of individuals. It is argued that broadening tends to lead to an increase in the scope of altruism, while fragmentation tends to lead to a decrease in its intensity. The theory is then applied to analyze the effects of long-term structural change, particularly changes in patterns of interaction that are created by such forces as economic commercialization and the consolidation of large-scale political units. Different patterns of such change lead to differences in the rate of broadening and fragmentation, which in turn lead to differences in altruism patterns.

These changes in cultural patterns in turn are shown to have systematic effects on rational political behavior, in particular on levels and types of political violence in society and the potential for authoritarian government. Broadening tends to initially increase the prospects for large-scale political violence (the advent of "plural-ethnic" society), then eventually decreasing them (the advent of "civil" society). Fragmentation tends to decrease the prospects of violence by reducing the amount of civil authority that is required to maintain order, but it also increases the prospects of successful authoritarianism. Unlike the other chapters, this chapter does not attempt to apply the theory to quantitative data or to specific cases. However, attempts are made to illustrate the processes with examples and to relate them with hypotheses found in the literature on political violence and the conditions for democracy.

Chapter 7, the conclusion of the book, discusses possible extensions and modifications of the coherence rational choice model. It also briefly discusses more general issues, including the integration of psychological and cultural explanations with economic explanations and the role of general actor models in social science theory.