

Sociological Rational Choice

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Many discussions of contemporary sociological theory are infused with a sense of disenchantment (Alexander, 1998). The expectation that theoretic development would prove cumulative is now seen by many theorists as a mirage. The field grows increasingly theoretically fragmented. Luminaries in one sub-field are frequently unaware of their contemporaries in other sub-fields. Theoretic fragmentation and micro-specialization divide the field into ever smaller and more isolated islands. These developments in sociology mirror larger intellectual trends. For example, a symposium of historians studying different facets of the French Revolution concluded that they had nothing to learn from one another.

Intellectual fragmentation due to micro-specialization is compounded by an additional fault line. Writing in the 1950s, C.P. Snow described the emergence of two cultures, science and humanities, which had become so divergent in language and world-view that they had lost even the ability to communicate with one another. This division corresponds to a major fault line in sociology. As Alexander (1998: 26) notes, the field is being pulled in opposite directions, between those who view sociology as a literary and humanistic enterprise, versus those who view it as a science. Thus multiple centripetal forces would appear to make the prospect for unified theory ever more remote.

The emergence of rational choice is a stunning exception to this trend toward ever-increasing fragmentation. Rational choice has always dominated economics, but economists are using this perspective to analyse subjects beyond their discipline's traditional domain, including the family (Becker, 1981), revolution (Kuran, 1995),

and emotions (Frank, 1988). During the last two decades, rational choice has emerged as the dominant perspective within political science, and it is now entering areas of the discipline, such as area studies, that had initially resisted it (Johnson and Keehn, 1994). Rational choice remains the foundation for most experimental social psychology, and recent work focuses on developing theories that are relevant at the macro-social level (Lawler et al., 1993). The growth of rational choice sociology is reflected in institutional developments such as the founding of the journal *Rationality and Society* in 1989 and the formation of a rational choice section in the American Sociological Association in 1994. Rational choice is also a force in anthropology (e.g., see Hopcroft, 1999), though it is so closely related to rational choice sociology that the two will be treated together. Because of its role in providing theoretic integration across the social science disciplines, rational choice has been described as *the interlingua of the social sciences*.

In addition to providing theoretic cohesion in the social sciences, rational choice also extends into the humanities, providing the basis for much current work in the philosophies of ethnics and law (Frey and Morris, 1994). Therefore, it bridges C.P. Snow's two cultures, providing integration across the boundary separating the humanities and the sciences.

WHAT IS RATIONAL CHOICE?

Despite rational choice's visibility as an intellectual movement and the emergence of an associated set of institutions and publication

outlets, no clear boundary differentiating rational choice from other theoretic perspectives is generally recognized. Indeed, there is no consensus regarding whether it can best be understood as a theory that is testable and hence potentially falsifiable, or whether it can better be understood as a theoretic perspective from which substantive theories can be derived. Here I adopt the latter, more common, interpretation.

Definitions of rational choice vary enormously in breadth. Some scholars define rational choice so broadly as to encompass the majority of sociological research, by equating it with any analysis in which behavior is viewed as purposive (Huber, 1997). In contrast, others employ a definition so restrictive that it would exclude virtually all sociological rational choice, by requiring that actors be viewed as motivated exclusively by self interest. (For a discussion of this latter position, see Mansbridge, 1990.) This chapter will focus on the intellectual movement involving scholarly works that are both self-identified as embodying a rational choice approach, and viewed by others as exemplifying that approach.

CONTINUITIES BETWEEN RATIONAL CHOICE AND TRADITIONAL SOCIOLOGICAL THEORY

Rational choice is frequently seen as differing from other theoretic approaches in sociology in two ways, a commitment to methodological individualism, and a view of choice as an optimizing process. However, on examination, neither suffices to differentiate rational choice from most other current work in the social sciences, including sociology.

Methodological individualism

Methodological individualism has been traditionally attacked within sociology because it undercuts the discipline's distinct area of investigation and threatens to dissolve it in favor of psychology. A commitment to at least some form of methodological individualism, in contrast, is often seen as a defining characteristic of rational choice (see Coleman, 1990: 5). The issue of methodological individualism is complex, so assessing and examining this issue requires clarification of terms. Joseph Schumpeter coined the term methodological individualism in 1908, though it was anticipated in the works of Jeremy Bentham and John Stuart Mill (Hodgson, 1986). The classic statement of methodological individualism is attributed to Ludwig von

Mises (1949). He argues that social, economic, and other societal-level phenomena can only be adequately explained in terms of the actions of individuals. Societal-level phenomena can therefore be explained exclusively in terms of micro-level events. The opposite form of explanation, in which macro-level events affect the individual, is thereby excluded. As a result, in von Mises' view causality lies exclusively at the micro-level, and macro-level events are mere epiphenomena. This is a statement of what may be termed *strict methodological individualism*.

Methodological individualism is frequently confused with a less stringent position that Lukes (1968) terms 'truistic social atomism'. According to Lukes, as its name implies, this position is expressed in truisms from which no reasonable person could dissent, such as 'society consists of individuals', and 'institutions consist of people plus rules and roles'. Even methodological holists do not claim that social institutions take on a physical reality divorced from their constituent individuals. The Leviathan, after all, is only a metaphor. For example, by viewing persons as 'empty vessels' whose contents are provided socially, they thereby recognize that social and institutional action is ultimately individual action. There are also many intermediate conditions between strict methodological individualism and truistic social atomism. However, no consensus exists regarding the point on this continuum at which a departure from strict methodological individualism fails to constitute a form of methodological individualism.

Contemporary sociological rational choice scholars do not embrace the strict form of methodological individualism. For example, James Coleman (1990: 5) described himself as committed to a 'special variant' of methodological individualism. An examination of his analyses show that this variant is closer to truistic social atomism than to the strict position. For example, Coleman argues that macro-level events cannot be adequately explained in terms of other macro-level events, a position consistent with methodological individualism. However, when Coleman describes the ideal form of explanations of macro-level events he argues that such explanations should combine three types of propositions: macro-to-micro propositions which express the effects of societal level factors upon individuals; micro-to-micro propositions which describe micro-level processes; and micro-to-macro propositions which show how individual level events aggregate to produce societal level changes. Hence, for Coleman, micro-level processes serve as the intermediate terms through which macro-level events are causally linked, but contrary to strict methodological

individualism, the analysis includes macro to micro propositions.

To find strict methodological individualists, one must look to economics, and yet even here the position is increasingly abandoned (for example, see Arrow, 1994). There are indications that even von Mises would have abandoned strict methodological individualism had he chosen to analyse sociological rather than economic problems. For example, he (1949: 41–2) states that ‘in the sphere of human action social entities have real existence. Nobody ventures to deny that nations, states, municipalities, parties, religious communities, are real factors determining the course of human events.’ Hence, at least within sociology and perhaps even somewhat beyond, truistic social atomism is the consensus position shared by rational choice and traditional theorists.

Optimization

A second trait of rational choice that is often viewed as distinct from traditional sociological theory is the view of choice as an optimizing process. This is the sense in which choice is viewed as *rational*. It is important to note here that unlike classical microeconomics, contemporary sociological rational choice does not assume that income or profit is maximized. Hence, these rational choice theorists have moved far from the classical microeconomic assumption that individuals seek to maximize income, to recognition of the multiplicity of egoistic and altruistic goals that can direct behavior. This is the form of analysis that Jane Mansbridge (1990: 20–1) terms ‘inclusive’ modeling, because analysts ‘are in principle happy to abandon the claim that self-interest is the sole operative motive and willing to work with any motive, provided only that the decision-maker maximize and be consistent’. This is a category in which she includes herself. The category also includes contemporary sociological rational choice scholars. Furthermore, these scholars all view rationality as ‘bounded’, in the sense that decision-makers are seen as having limited information of uncertain validity, and limited abilities to acquire and process information – hence they have also moved far from the classic microeconomic assumption of complete information. Because of the boundedness of rationality, actors are frequently unable to anticipate the effects of their actions. Many of the consequences of their actions are therefore unintended. The result may be positive, as in invisible hand systems, or the result may be disaster.

Given the recognition that preferences need not exclude altruistic motivations and information

need not be complete, the question remains as to whether conceptualizing choice as an optimizing process constitutes a point of essential differentiation between rational choice and traditional theory. Addressing this question requires an examination of the concept of purposive action shared by both approaches. Attribution of purpose to explain behavior involves a form of teleology. Two forms of teleological explanation can be distinguished (Elster, 1990). *Objective teleology* refers to processes such as Darwinian evolution, in which the appearance of purpose arises despite the absence of an intentional actor. For example, wings evolved as though their purpose were to fly. This is functionalist explanation. In contrast, *subjective teleology* refers to the actions governed by a system of values, goals, or aims, and hence to purposive action. This link between purposiveness and teleology is significant, because according to philosophers or science, any teleology implies some form of extremal principle (Nagel, 1953). This is a principle of maximization (for example, striving to attain a goal) or, what is the same thing from a formal standpoint, minimization (for example, striving to avoid falling short of a goal). Hence, purposive action entails maximization. The implication is that maximization principles are not merely used by rational choice theorists. They are also used implicitly by others who view behavior as purposive.

From a mathematical standpoint, the demonstration that purposive action entails maximizing assumptions should not be surprising, because in principle, any well-defined system can be described in maximizing terms. Hence the use of maximizing principles does not impose significant constraints upon an analyst. It merely requires that system dynamics be well described. The use of maximizing principles therefore does *not* constitute a point of essential differentiation between traditional and rational choice theory.

This examination of methodological individualism and optimization serves to emphasize the continuities between traditional and rational choice theory. This leaves us with the difference between traditional sociological theory and rational choice that they describe, that the latter makes explicit that which is implicit in the former.

WHAT IS UNIQUE ABOUT RATIONAL CHOICE ANALYSIS?

Given the substantive overlap in core assumptions regarding actors and their relationship to structure of rational choice and traditional sociological theory, it might seem that the differences

are inessential. As Hechter and Kanazawa (1997: 192) note, 'many sociologists, like the character in Moiré's *Bourgeois Gentleman* who was startled to learn that he was speaking prose, unwittingly rely on rational choice mechanisms in their own research'. Is rational choice then merely a new label, albeit a provocative and controversial label, by which to describe what may sociologists have been doing all along? Though exaggerating the discrepancy between the two would be a mistake, so too would it be a mistake to fail to appreciate the distinctiveness of rational choice.

What makes rational choice distinctive is that the conception of choice as an optimizing process is made *explicit*. It might seem that making an assumption explicit would be a minor matter. However, it has important implications, for it imposes a common structure on rational choice models. Each must specify a core set of theoretic terms, including (1) the set of actors who function as players in the system, (2) the alternatives available to each actor, (3) the set of outcomes that are feasible in the system given each actor's alternatives, (4) the preferences of each actor over the set of feasible outcomes, and (5) the expectations of actors regarding system parameters. Rational choice models can also vary along many dimensions. They may be expressed mathematically or discursively, they can correspond to one-shot games in which actor makes only a single choice, or processual models in which each actor's choices affect the conditions under which they and others will make subsequent choices, they may assume materially based instrumental preferences or include preferences for social approval, altruism, or justice; they may assume information is complete (that is, knowing the structure of the game, including others' preferences), perfect (that is, also knowing others' strategies), or information may be incomplete and reflect either risk (that is, knowing the probability of occurrence for each uncertain event) or uncertainty (that is, not knowing these probabilities); they may include individual actors, corporate actors, or a combination of both types of actors. Despite such variations, due to the common structure of rational choice theories, they share a common theoretic vocabulary. It is this common vocabulary that permits rational choice to function as the interlingua of the social sciences, and ensures that theoretic developments in one substantive area will have implications in other substantive areas.

Due to the common structure of rational choice theories, analysis revolves around a limited set of issues. One central issue concerns the relationships among preferences. If individual preferences are convergent, the system is

guided to optimality by an invisible hand, so individually rational actions lead to outcomes that are also collectively rational. However, such situations are rare empirically. In the absence of an invisible hand, everyone acting rationally could lead to an outcome that is collectively irrational, in that everyone is worse off relative to other feasible outcomes. Such situations, where a potential conflict exists between individual and collective rationality, are termed *social dilemmas*. A substantial part of rational choice theory concerns how actors resolve, or fail to successfully resolve, these dilemmas.

Social dilemmas

Three social dilemmas have received special attention in the literature (for a typology see Heckathorn, 1996). These focus on issues of trust, competition, and coordination. The best known of these is the Prisoner's Dilemma (PD) (see Figure 21.1A). It is named for a vignette in which two criminal suspects are questioned separately about a crime. Their interests derive from the preference order of the core game's payoffs. The most preferred outcome is unilateral defection ('Temptation', T), where one benefits from confessing when the other remains quiet; then comes Universal Cooperation (the 'reward', R) where both remain quiet and receive

Prisoner's Dilemma		Chicken Game			
	C	D		C	D
C	3, 3	0, 5	C	3, 3	1, 5
D	5, 0	1, 1	D	5, 1	0, 0

Assurance Game		Invisible Hand (Privileged) Game			
	C	D		C	D
C	5, 5	0, 3	C	5, 5	1, 3
D	3, 0	1, 1	D	3, 1	0, 0

Figure 21.1 *Social dilemma games.* The number on the left in each cell is Row's payoff, the number on the right is Column's payoff. Each player has a choice between cooperation (C) and defection (D). Four outcomes are possible in each. These are generally designated Reward (universal cooperation), Sucker (unilateral cooperation), Temptation (unilateral defection), and Punishment (universal defection)

light sentences; next comes Universal Defection ('punishment', P) where both confess and are severely punished; and the worst is Unilateral Cooperation ('sucker', S), where only the other confesses so one's own penalty is most harsh. A second requirement is that the reward from universal cooperation is preferable to any mix of unilateral cooperation and defection (i.e., $R > (T+S)/2$). The essential problem is one of *trust*. If the prisoners can trust one another to act on their common interest in remaining quiet, they can escape with a light sentence. A marker indicating the presence of this dilemma is the potential for hypocrisy. Whenever individuals are tempted to act in ways they would prefer others not adopt, the presence of a PD should be suspected. This game has become the paradigm for cases where individually rational actions lead to a collectively irrational outcome.

The PD can affect dyads or larger groups. A group version arises when a group seeks to produce a *public good*. A public good is defined by two characteristics. First, excluding anyone from its benefits would be impractical. Examples include police protection and national defense. Second, public goods are characterized by jointness of supply, for example, the cost of national defense does not increase along with population. Because of these two attributes, provision of public goods faces a free-rider problem, in that even those who did not contribute to their production none the less enjoy their benefits. For example, even tax evaders benefit from police protection and national defense.

The literature focuses on two distinct means by which PDs can be resolved. First, incentives can serve to either reward those who cooperate or punish those who free-ride. An example of the latter is punishment for theft. Reciprocity includes another example of an incentive system, in which trustworthy or untrustworthy behavior is reciprocated in kind. Second, reputation systems provide information about who can and cannot be trusted, and thereby provide the means by which cooperators can locate and interact with one another.

A second social dilemma, which can be described in game theoretic terms as a Chicken Game, concerns competition for some form of scarce resource. In this game, the order of the two least valued payoffs are reversed from their position in the PD, that is, the new order is $T > R > S > P$. This reversal of preferences occurs, in essence, because less than universal cooperation suffices to produce most of the gains attainable from cooperation. This game is named for a contest in which drivers test their courage by driving straight at one another. Each player chooses between two strategies, Chicken (swerve to avoid a collision) or Daredevil (do not

swerve). Thus the order of preferences is: Temptation, the other swerves; then Reward, both swerve; then Sucker, ego swerves; and the worst of all is Punishment, a head-on collision. The essential problem in a Chicken Game is *allocation of concessions*. Players combine a common interest in avoiding conflict, with competing interests regarding the terms of agreement, such as the allocation of courage, honor, or profit. This game fits systems where a common interest in collective action coexists with opposed preferences regarding the precise direction that action should take. Examples include the hawk-dove split that arises in many social movements, in which purists claim that pragmatists are selling out by forsaking the movement's essential goals, and pragmatists claim that purists' unwillingness to compromise will lead the movement into ruinous conflict.

The literature on this dilemma focuses on two ways in which it can be resolved. First, theories of bargaining seek to explain how actors assess the strengths of their strategic positions when deciding how many concessions to offer, and thereby seek to explain the allocation of concessions that make agreement possible, and the origins of conflict when efforts to reach agreement fail. Examples of these models include Harsanyi's (1977) model, resistance theory (Heckathorn, 1980) and Rubinstein's (1982) model. The various models agree on some principles, such as that all else equal, an increase in the costliness of conflict will weaken an actor's strategic position and lead to more concessions. A second resolution of the dilemma precludes or narrows the scope for bargaining by defining rights to scarce resources, as in a system of property rights. Thus a property rights system confers legitimacy on particular allocations of resources (Alchian and Demsetz, 1973).

A third type of social dilemma, which is a game theoretically described as an assurance game, arises when coordination is required for some joint endeavor. The effect in games such as those depicted in Figure 21.1 is to make universal cooperation preferred to unilateral defection, thereby reversing the order of the two most highly valued outcomes from their position in the PD, that is, the new order is $R > T > P > S$. This game derives its name from the fact that each player can be motivated to cooperate by the mere assurance that the other will do the same. A collective action system fits it if participation with others is valued, participation can take multiple forms, and therefore coordination regarding the form of participation is required. For example, if two people want to meet at a restaurant for lunch, they must coordinate their choice of restaurant. Though it might seem that resolution of the coordination problem would be

		Target of impact	
		Single actor	Multiple actors
Source	Single actor	Market	Hierarchy
	Multiple actors	Normative System	Electoral System

Figure 21.2 *Institutional form as a function of source and target of impact of action*

trivial, it has proven especially challenging for rational choice theorists. One approach focuses on the identification of focal points around which coalitions of cooperators can rally.

Institutional forms

Rational choice models can be differentiated based on the institutional form to which they refer. Four basic institutional forms are possible based on whether the choices through which the institution is constituted are the product of a single actor or multiple actors, and whether the target of impact of the action is single or multiple actors. The logical possibilities can be expressed in the form of a two-by-two table (see Figure 21.2). A distinct rational choice literature has arisen focusing on each of these four institutional forms.

Norms have long been an important focus of sociological investigation. Whereas a view of social actors as rule followers has been a traditional part of sociological theory, rational choice sociology tends to focus on the emergence and enforcement of norms. The interactional structure on which norms are based involves multiple actors exerting control over a single actor, as when a norm violation triggers collective expressions of disapproval. In normative systems, power relations have a unique feature, wherein *power is everywhere elsewhere*. Even the most powerful individual is controlled by the actions of the others, so from the standpoint of each individual, power lies elsewhere, that is, within the remainder of the group. This form is quintessentially sociological, in that the group takes on a reality – that is, it exerts a form of control – that is independent of each of the individuals in the group. Hence, it should not be surprising that sociologists have been especially heavy contributors in this area.

A distinct type of norm corresponds to each of the three types of social dilemma (Ullmann-Margalit, 1977). First, PD norms, as the name implies, serve as a means for resolving that dilemma. These involve either normatively

punishing defectors or rewarding cooperators. Violation of these norms entail hypocrisy. For example, usually, murderers do not want to be murdered, burglars do not want their own homes burgled, rapists do not want to be raped, and liars do not want others to lie to them. Every society contains a variant of the golden rule, which codifies such norms. Secondly, Ullmann-Margalit (1977) identified what she termed inequality-preserving norms. These *allocation norms* legitimize the current distribution of scarce resources, including property, power and prestige, and thereby define a system of *property rights*. In a system without property rights, such as the hypothetical Hobbesian war of all against all, resources would be continually reallocated based on relative physical strength, threat capability and other coercive measures. In contrast, in a system with property rights, only transfers deemed legitimate are subject to negotiation. The effect is to narrow radically the scope for bargaining by precluding non-legitimate transfers of resources. Thirdly and finally, Ullmann-Margalit (1977) defined coordination norms as those that solve coordination problems. These include norms specifying the meaning of symbols, for example, the meanings of words. Thus a language can be seen as a vast system of coordination norms. Other coordination norms regulate turn-taking in conversation, body language, clothing styles, table manners, standards for weights and measures, and the innumerable rules that each generation of parents must struggle to teach their children.

The emergence and enforcement of norms entails a form of *collective action* because of the inherently cooperative nature of normative regulation. Building on the pioneering work of Mancur Olson (1965), a large literature on collective action has emerged (Hardin, 1982) to which sociologists have emerged as major contributors (Heckathorn, 1996; Macy, 1990; Marwell and Oliver, 1993). This literature focuses on the emergence and maintenance of social cooperation, including resolution of the free-rider problem that arises because norms themselves constitute a public good, a benefit