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**Article title:** Rational Choice  
**Article ID:** 9780199756384-0070  
**Article author(s):** Rafael Wittek  
**Publishing Group:** Reference-US

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Style and XML details

**Citation style:** Scientific  
**Special characters/fonts/elements:**

Module details

**Module:** Sociology      **Module code:** SOC      **Module ISBN:**  
9780199756384

## **RATIONAL CHOICE**

### **INTRODUCTION**

“Rational choice theory” is a general theory of action and is considered one of the three overarching meta-theoretical paradigms in the social sciences, with structural-institutional theories and cultural theories constituting its main competitors. Rational choice theory explains social phenomena as outcomes of individual choices that can—in some way—be construed as rational. Choices are “rational” if they meet some consistency criterion as defined by a decision theory and are suitable to achieve specific goals, given the constraints of the situation. Rational choice theory comes in many varieties, depending on the assumptions that are made concerning preferences, beliefs, and constraints—the key elements of all rational choice explanations. Preferences denote the positive or negative evaluations individuals attach to possible outcomes of their actions. Preferences can have many roots, ranging from culturally transmitted tastes for food or other items to personal habits and commitments. Beliefs refer to perceived cause-effect relations, including the perceived likelihood with which an individual’s actions will result in different possible outcomes. Constraints define the limits to the set of feasible actions. After presenting references containing *\*General Overviews\**, *\*Reference Works\**, *\*Textbooks\**, and *\*Journals\**, the main part of this article is organized around what can currently be considered as the three major pillars of the framework: the way it approaches the construction of theories (“rational choice model building”), including its assumptions about rationality and preferences of humans; the way it deals with network embeddedness (*\*Rational Choice Structuralism\**); and the way it deals with institutions (*\*Rational Choice Institutionalism\**). Being a general theory of action, rational choice theory can be, and has been, applied to explain social phenomena in almost any subfield of the social and behavioral sciences, although the section on *\*Selected Applications of Rational Choice Theory\** can present only an idiosyncratic fraction of these applications. Whereas rational choice theory constitutes the theoretical core of economics, it faces considerable criticism in other branches of the social and behavioral sciences. This reluctance stems from what critics consider the theory’s core assumptions about human nature, and its purportedly bad track record when it comes to empirical evidence. Much of this criticism rests on major misconceptions of the approach and fails to incorporate the considerable advancements that the approach has made during the past two decades. The section on *\*Critique and Advocacy of Rational Choice Theory\** lists some main contributions to this debate. The article concludes with a selection of *\*Informative Popularizations of Rational Choice Theory\** of the approach: easy and stimulating reads that apply the core ideas of the approach to a large variety of phenomena.

### **GENERAL OVERVIEWS**

Two encyclopedia entries provide a very good start for acquiring an introductory general overview of the domain of rational choice theory in sociology (Lindenberg 2006, Hedström and Stern 2008). They are complemented by two article-length texts explicating the foundations of the approach in more detail (Voss and Abraham 2000, Goldthorpe 1998). Udehn 2001 offers an in-depth comparison of different varieties of individualistic explanations. Lichbach 2003 helps to position the rational choice approach in the broader context of other meta-theoretical paradigms. Lindenberg 1985 is useful because it contrasts the micro models of economics and sociology. Goldthorpe J. 1998. Rational action theory for sociology. *British Journal of Sociology* 49.2: 167–192.

Argues that varieties of rational choice theory can be distinguished along three dimensions: the strength of their rationality requirements, their focus on situational versus procedural rationality, and their claim to be a general versus a specific theory of action. Helps to locate different varieties of the approach in the resulting multidimensional space.

Hedström, P., and C. Stern. 2008. Rational choice and sociology. In *The new Palgrave dictionary of economics*. Edited by S. N. Durlauf and L. E. Blume, 872–877. Basingstoke, UK: Palgrave Macmillan. [ISBN: 9780333786765]

Refers to the work of the key scholars contributing to the emergence of the rational choice approach in sociology. Discusses empirical achievements of the rational choice approach and explicates the differences between sociological and economic versions of the approach as well as its standing within sociology.

Lichbach, M. I. 2003. *Is rational choice theory all of social science?* Ann Arbor: Univ. of Michigan Press. [ISBN: 9780472098194]

Particularly useful for a systematic comparison of the rational choice approach with the two other social science paradigms, culturalism and structuralism. Also pays attention to the possibilities and limitations of strategies trying to integrate the different approaches.

Lindenberg, S. 1985. An assessment of the new political economy: Its potential for the social sciences and for sociology in particular. *Sociological Theory* 3.1: 99–114.

Still the most in-depth analysis of the different conceptualizations of human nature in economics and sociology. Discusses assumptions about human nature along the dimensions of resourcefulness, restrictions, expectations, evaluations, and maximizing (the RREEMM-model).

Lindenberg, S. 2006. Rational choice theory. In *International encyclopedia of economic sociology*. Edited by J. Beckert and M. Zafirovski, 548–552. New York: Routledge. [ISBN: 9780415286732]

A concise and well-structured general overview of the rational choice approach and its application in economic sociology. Useful for its illustration of two variants of the theory's "basic toolkit": explanations assuming full information versus less than full information.

Udehn, L. 2001. *Methodological individualism: Background, history, and meaning*. London: Routledge. [ISBN: 9780415218115]

One of the most comprehensive treatments of the philosophical roots of the individualism assumption, a key element of the rational choice approach. It distinguishes between strong assumptions of "natural" methodological individualism made by economists and weaker versions of structural individualism made by sociologists, which allows a broad set of societal-level conditions to influence individual-level choice.

Voss, T., and M. Abraham. 2000. Rational choice theory in sociology: A survey. In *The international handbook of sociology*. Edited by S. R. Quah and A. Sales, 50–83. London: SAGE. [ISBN: 978076196887]

This general overview has four parts: history of the approach, assumptions about human nature, explanations of social norms, and an overview of applications in diverse fields of sociology. The very transparent presentation of core assumptions addresses some common misconceptions and contains a very useful section on limitations, alternatives, and extensions.

## REFERENCE WORKS

Four consecutive literature reviews in the *Annual Review of Sociology* are useful for tracing the development of the theoretical core and the empirical applications of rational choice research in the field of sociology during the past two decades (Kronenberg and Kalter 2012, Boudon 2010, Hechter and Kanazawa 1997, Macy and Flache 1995). Four handbooks offer chapter-length

treatments of specific problem areas and applications of the rational choice approach in the field of philosophy (Mele and Rawling 2004), decision theory (Anand, et al. 2009), analytical sociology (Hedström and Bearman 2009), and social research (Wittek, et al. 2013).

Anand, P., P. Pattanaik, and C. Puppe, eds. 2009. *The handbook of rational and social choice*. Oxford: Oxford Univ. Press. [ISBN: 9780199290420]

Focus on economic decision theory. In-depth treatment of utility theory and models of social choice. Contains twenty-three chapters, addressing topics that include, among others, ambiguity, imitation and learning, nonexpected utility, freedom of choice, distributive justice, judgment aggregation, and the capabilities approach.

Boudon, R. 2010. Beyond rational choice theory. *Annual Review of Sociology* 29:1–21.

Sketches a model that attempts to combine the advantages of the approach but avoids its shortcomings. Criticizes the approach for reducing rationality to instrumental motives and for neglecting cognitive rationality. Available \*online[<http://www.jstor.org/stable/pdfplus/2952549.pdf>]\* by purchase.

Hechter, M., and S. Kanazawa. 1997. Sociological rational choice theory. *Annual Review of Sociology* 23:191–214.

Offers a good selection of earlier empirical applications of rational choice theory in fields as diverse as family and demography, gender, organizations, crime and deviance, and historical and political sociology.

Hedström, P., and P. Bearman, eds. 2009. *The Oxford handbook of analytical sociology*. Oxford: Oxford Univ. Press. [ISBN: 9780199215362]

Many of the thirty chapters of this carefully edited compendium deliver state-of-the art introductions to key concepts of rational choice theory and its recent extensions through behavioral economics and related disciplines. Part 2 covers preferences, opportunities, beliefs, signaling, norms, heuristics, emotions, and trust. Part 3 addresses social dynamics.

Kronenberg, C., and F. Kalter. 2012. Rational choice theory and empirical research: Methodological and theoretical contributions in Europe. *Annual Review of Sociology* 38:73–92.

The most recent review in the field. Emphasizes methodological challenges and advancements. Particular attention is paid to direct versus indirect test strategies, the problem of theory-guidance, and recent meta-theoretical developments toward a wider version of the approach.

Macy, M., and A. Flache. 1995. Beyond rationality in models of choice. *Annual Review of Sociology* 21:73–91.

This first review of sociological rational choice applications in the Annual Review series pays particular attention to progress in the field of network exchange theory and evolutionary models of collective action. Also contains an overview of the “unintended consequences” literature.

Mele, A., and P. Rawling, eds. 2004. *The Oxford handbook of rationality*. Oxford: Oxford Univ. Press. [ISBN: 9780195145397]

Twenty two chapters in which philosophers exploring the nature of rationality (e.g., theoretical, practical, Humean, and procedural rationality) and rationality in specific domains, including gender, language, legal theory, evolution, and psychology.

Wittek, R., T. A. B. Snijders, and V. Nee. 2013. *The handbook of rational choice social research*. Stanford, CA: Stanford Univ. Press. [ISBN: 9780804784184]

Takes stock of attempts to put rational choice theory to an empirical test. The sixteen chapters provide an overview of theories of, and advances in, the rational choice approach in domains of empirical social research such as behavioral theories, inequality, religion, migration, organizations, and markets.

## TEXTBOOKS

Rational choice theory has its roots in the moral philosophy of the Scottish Enlightenment. Its theoretical core was subsequently developed further mainly in economics. Textbooks in this field usually put a relatively strong emphasis on the (formal) decision theoretical foundations as they serve as the basis of microeconomics. In sociology, rational choice textbooks (or monographs coming close to this definition) tend to highlight the institutional and psychological foundations of the approach. For a sound understanding of the rational choice paradigm as a whole, students are advised to familiarize themselves with both the economic and the sociological foundations of the approach: though they overlap, both emphasize different aspects.

### Sociology and Psychology Textbooks

Sociologists started to discover the rational choice approach in the late 1970s, and they realized its potential to provide possible solutions to the micro-macro problem. Sociological applications of rational choice reasoning consequently focused more on the problem of how collective-level outcomes in different societal domains can be explained with the tools of methodological individualism (Udehn 2001, cited under \*General Overviews\*). This resulted in a strong interest in the explications and workings of social mechanisms, particularly because it facilitates acquiring a better understanding the unintended consequences of purposeful action. Boudon 1981 still stands out as one of the best introductory reads, both as a vivid illustration of how individually rational behavior shapes macro outcomes and vice versa and as an introduction to sociology. Esser 1999–2001, a magisterial six-volume introduction to sociology (in German), has a similar objective. Building creatively on James Coleman's and, in particular, Siegwart Lindenbergs contributions, it provides what is currently probably the most comprehensive introductory text to sociological rational choice reasoning and to its broad applicability to a large variety of social phenomena. Another useful (German) sociological introduction to rational choice theory is Hill 2002, a concise booklet. At the same time, social mechanism reasoning has emerged as a separate subfield under the label of analytical sociology. Though analytical sociology is a general approach not restricted to rational choice theory as its micro foundation, it is strongly influenced by it. The *Handbook of Analytical Sociology* (Hedström and Bearman 2009, cited under \*Reference Works\*), therefore, is very useful complementary reading because most of its thirty chapters deal with concepts relevant to rational choice theory and often provide very useful introductions. Also Elster 2007 advocates a social mechanism approach and addresses many key concepts of rational choice theory, whereas Hastie and Dawes 2010 tackles the psychological foundations of decision making under uncertainty.

Boudon, R. 1981. *The logic of social action: An introduction to sociological analysis*. London: Routledge & Kegan Paul. [ISBN: 9780710008572]

Originally published in 1979. Probably the first book-length introduction to sociology from a rational choice perspective. Uses key principles such as bounded rationality, social mechanism reasoning, and unintended consequences to interpret classical sociological problems.

Elster, J. 2007. *Explaining social behavior: More nuts and bolts for the social sciences*. Cambridge, UK: Cambridge Univ. Press. [ISBN: 9780521771795]

This significantly extended revision of the 1989 textbook *Nuts and Bolts for the Social Sciences* contains a comprehensive treatment of the principles of social mechanism explanations and the role of assumptions about the mind, action, and interaction for social explanations.

Esser, H. 1999–2001. *Soziologie: Spezielle Grundlagen*. 6 vols. Frankfurt: Campus.

In-depth treatment (in German) of the logic of rational choice explanations, with a lot of examples and step-by-step applications that allow students to see how rational choice concepts and reasoning can be applied to explain a large variety of social phenomena. Contains insightful rational choice reinterpretations of many classical sociological contributions.

Hastie, R., and R. Dawes. 2010. *Rational choice in an uncertain world*. Thousand Oaks, CA: SAGE. [ISBN: 9781412959032]

A non-technical introduction to judgment and decision making written by two psychologists. This second edition of Dawes 2001 book covers recent developments in research on emotions, neurosciences, and the adaptive value of heuristics.

Hill, P. 2002. *Rational-Choice-Theorie*. Bielefeld, Germany: Transcript Verlag. [ISBN: 9783933127303]

A concise and accessibly written German introduction for sociologists. It explicates the social mechanism perspective and how the “logic of the situation” as affects individual choices. Presents some illustrative applications from the field of migration, the “value of children,” the emergence of norms, and research on protest and collective action.

### **Economics Textbooks**

Many excellent textbooks are available on microeconomics. Bowles 2009 might be particularly interesting for sociologists because it dedicates much effort to explicate the institutional context of choice and economic phenomena, including an in-depth treatment of co-evolution of institutions and preferences, a domain to which the author made significant contributions himself. Bowles also keeps formalization to a minimum. The same holds for Gilboa 2010, a short introduction, which explicitly focuses on rational choice theory rather than microeconomics. Heap, et al. 1992 is an older textbook focusing on the theory of choice, providing additional technical background knowledge. Finally, Sandler 2001 is a stimulating read for its application of economic reasoning on social phenomena.

Bowles, S. 2009. *Microeconomics: Behavior, institutions, and evolution*. Princeton, NJ: Princeton Univ. Press. [ISBN: 9781400829316]

Part 1 treats coordination and conflict and introduces preferences, principles of spontaneous orders, and coordination failures. Part 2 addresses the institutions of capitalism governing competition and cooperation (e.g., exchange, employment, credit markets). Part 3 covers the co-evolution of institutions and preferences.

Gilboa, I. 2010. *Rational choice*. Cambridge, MA: MIT Press. [ISBN: 9780262014007]

A nontechnical introduction to rational choice theory, with an emphasis on social choice, decision making, and game theory as well as providing a good treatment of risk and uncertainty. Written by an economist, it incorporates insights from sociology, psychology, and philosophy when it touches upon the evolutionary view of emotions and the link between utility and well-being. Online appendix with exercises and solutions.

Heap, S., M. Hollis, B. Lyons, R. Sugden, and A. Weale. 1992. *The theory of choice: A critical guide*. Oxford: Blackwell. [ISBN: 9780631171744]

A more technical treatment of choice theory, structured along three levels of analysis: individual, interactive, and collective choice. Chapters have an analytical, an applied, or an evaluative focus. Applied chapters cover topics such as consumer theory, risk and ignorance, bargaining, organizations, democracy, and power. Evaluative chapters discuss autonomy, anarchic order, and social justice.

Sandler, T. 2001. *Economic concepts for the social sciences*. Cambridge, UK: Cambridge Univ. Press. [ISBN: 9780521796774]

Accessibly written nontechnical introduction to economic explanations of social phenomena, with many examples of, and applications to, contemporary social issues. Elaborates on five themes of “the new economics”: strategic interaction, market failure, the importance of institutions, the incorporation of insights from behavioral and social sciences, and a stronger attention to processes of change.

## JOURNALS

All well-known multidisciplinary journals as well as the flagship journals of the classical social and behavioral science disciplines (sociology, economics, psychology, political science) publish articles making strong contributions to rational choice research. Several more specialized journals are invaluable resources for those who want to stay informed about trends in the field. For sociologists who explicitly address problems in, and applications of, rational choice theory, the journal **Rationality and Society** is the major outlet. The **Journal of Mathematical Sociology** is an outlet for formal models, which often are rooted in a rational choice framework. **Social Psychology Quarterly** also frequently publishes works that directly touch upon rational choice issues from a psychological perspective. **Theory and Decision** is a disciplinary transcending platform for research on decision making. **Public Choice** and the **Journal of Institutional and Theoretical Economics** are dedicated to the intersection between economics and, respectively, political and policy science.

\*Journal of Institutional and Theoretical Economics, JITE [<http://www.mohr.de/en/journals/economics/journal-of-institutional-and-theoretical-economics-jite/journal.html>]\*. 1844–. [class:periodical]

Sequel to the *Zeitschrift für die Gesamte Staatswissenschaft* (founded in 1814), one of the oldest journals in the field of political economy. Focus on problems of economics, social policy, and their legal framework.

\*Journal of Mathematical Sociology [<http://www.tandfonline.com/GMAS>]\*. 1971–. [class:periodical]

Dedicated to formal models of emergent complex social structures (e.g., informal groups, organizations, global systems) and their empirical test. Models are often informed by rational choice reasoning.

\*Public Choice [<http://www.springer.com/economics/public+finance/journal/11127>]\*. 1966–. [class:periodical]

Focuses on the intersection between economics and political science, in particular, applications of economic models to political phenomena in the broad sense.

\*Rationality and Society [<http://intl-rss.sagepub.com/>]\*. 1989–. [class:periodical]

Founded by James Coleman in 1989, this international peer-reviewed journal is the major sociological outlet for both theoretical and empirical rational choice research.

\*Social Psychology Quarterly [<http://intl-spq.sagepub.com/>]\*. 2004–. [class:periodical]

An official publication of the American Sociological Association, this journal frequently publishes experimental research of relevance to the rational choice approach.

\*Theory and Decision [<http://www.springer.com/economics/economic+theory/journal/11238>]\*. 1970–. [class:periodical]

A journal that specializes in experimental research on all aspects of decision making in a large variety of fields ranging from game theory and psychology to operations research and analytical philosophy.

## **RATIONAL CHOICE MODEL BUILDING**

One important characteristic of rational choice theory is that it makes very explicit assumptions on two issues: one about how to arrive at explanations or predictions of social phenomena at the collective level and one about individual decision makers. The first issue refers to the explication of social mechanisms and solves the so-called micro-macro problem. The second issue refers to a large variety of rationality assumptions. Assumptions about goals and preferences relate to the old debate on “human nature,” and they touch upon questions of selfishness and altruism. Bounded rationality assumptions refer to the problem that humans do not have unlimited cognitive capacities, which leads to selective attention and restricted information-processing abilities. Also “backward looking” learning models receive increasing attention as an alternative to the strong assumptions of the standard model. Another class of assumptions refers to situations in which individual decision makers find themselves in positions of strategic interdependence with others. Rational choice approaches dealing with these types of situations can be roughly grouped into models focusing on the problem of incomplete information (in particular, principal-agent theory and signaling theory) and models focusing on mixed-motive interdependence (in particular, game theoretical research on social dilemmas).

### **Social Mechanisms and the Micro-Macro Link**

One of the strengths of the rational choice approach is that it can build on a very explicit framework for solving the so-called micro-macro problem. The latter refers to the question how societal level phenomena—properties of collectivities, such as the degree of cohesion of a society, the GDP of a country, or the production of collective goods—explain, and need to be explained, by individual-level characteristics and behaviors (such as religious beliefs). Rational choice theory’s tool to solve this problem is social mechanism reasoning.

#### ***Social Mechanisms***

Two analytical principles guide model building in rational choice theory: the so-called method of decreasing abstraction (Lindenberg 1992) and social mechanism reasoning (Hedström 2005). The method of decreasing abstraction suggests that explanations of social phenomena should start with a simple set of assumptions and that the complexity of the model should be increased gradually only in those cases where the simpler model fails to yield a satisfying explanation. Social mechanism reasoning implies that an explanation of a macro-level phenomenon is complete only if three mechanisms are fully explicated: (1) the situational mechanism, which specifies how macro-level phenomena affect the opportunities and preferences of individuals at the micro level; (2) the action-generation mechanism, which specifies how individual-level preferences and constraints affect individual-level (behavioral) outcomes; (3) the aggregation mechanism, which specifies how individual-level outcomes at the micro level bring about collective-level outcomes. In sociology, Coleman 1990 had a significant impact in diffusing social mechanism reasoning as a solution to the micro-macro problem. In economics, it is ingrained in the discipline’s analytical toolkit to a degree that most scholarly articles do not explicate this analytical strategy. In fact, economics is the only social science discipline that can build on something like a “canonical” model, namely a set of assumptions and analytical tools that are widely shared within the discipline. Nobel laureate Gary Becker’s work, in particular Becker 1976, not only exemplifies this analytical strategy, but also illustrates that it can be fruitfully applied to “noneconomic” domains. Olson 1965 is a classic contribution that still remains the most powerful illustration of social mechanism reasoning to explain collective action. Kiser and Hechter 1998 elaborates on the advantages of rational choice reasoning in the field of historical sociology. Since the 1990s, interest

has grown in using this toolkit also in sociology, with rational choice scholars pioneering the application of social mechanism reasoning. They also emphasize its potential to provide a better theoretical foundation for research making use of large-scale data sets (Goldthorpe 1996). Nevertheless, rational choice sociologists still actively engage with both the potential limitations and the scope of conditions of social mechanism reasoning (Opp 2005).

Becker, G. S. 1976. *The economic approach to human behavior*. Chicago: Univ. of Chicago Press. [ISBN: 9780226041117]

Starts with a reflection on what constitutes the “essence” of the economic approach. Presents several exemplary applications of how formal economic reasoning can be applied to explain a diversity of macro-level social phenomena (e.g., discrimination, fertility). Claims that “the economic approach provides a valuable unified framework for understanding *all* human behavior” (p. 14).

Coleman, J. 1990. *Foundations of social theory*. Cambridge, MA: Belknap Press of Harvard Univ. Press. [ISBN: 9780674312258]

The key contribution in the field of rational choice sociology and a must-read for social scientists with an interest in theory. Systematically introduces the elementary assumptions and logic of rational choice reasoning. With a methodological appendix.

Goldthorpe, J. 1996. The quantitative analysis of large-scale data-sets and rational action theory: For a sociological alliance. *European Sociological Review* 12.2: 109–126.

A plea for injecting rational choice theorizing into variable-centered social research, two traditions that are traditionally considered at odds with each other. Available \*online[<http://www.jstor.org/stable/522430>]\* by purchase.

Hedström, P. 2005. *Dissecting the Social: On the principles of analytical sociology*. Cambridge, UK: Cambridge Univ. Press. [ISBN: 9780521792295]

This concise book contains a good balance between in-depth treatment of the logic and implications behind the social mechanism approach, and it provides an illustration of its potential for empirical analysis. Uses well-known everyday examples to illustrate social mechanisms (e.g., “wishful thinking”). Best book award of the Rationality and Society section of the ASA.

Kiser, E., and M. Hechter. 1998. The debate on historical sociology: Rational choice theory and its critics. *American Journal of Sociology* 104.3:785–816.

Provides extensive theoretical and philosophical arguments to make a strong case for the use of general theory, in particular, rational choice, as opposed to more particularistic approaches to historical explanation. Draws on a wide variety of historical case studies to illustrate this point. Available \*online[<http://www.jstor.org/stable/10.1086/210086>]\* by purchase.

Lindenberg, S. 1992. The method of decreasing abstraction. In *Rational choice theory: Advocacy and critique*. Edited by J. S. Coleman and T. J. Fararo, 3–20. Newbury Park, CA: SAGE. [ISBN: 9780803947610]

Explicates the usually implicit strategy of developing a rational choice explanation. Suggests an iterative process that starts with simple assumptions and adds structural and cognitive complexity only if the simpler model does not have enough explanatory power. Later on supplemented by the “principle of sufficient complexity.”

Olson, M. 1965. *The logic of collective action: Public goods and the theory of groups*. Cambridge, MA: Harvard Univ. Press.

A modern classic exploring the question why groups of rational individuals sharing similar interests fail to achieve collective action. Analyzes how and under which conditions (in particular, group size) selective incentives may solve this problem. Provides empirical illustrations from labor unions and lobby and other pressure groups.

Opp, K. D. 2005. Explanations by mechanisms in the social sciences: Problems, advantages and alternatives. *Mind and Society* 4.2: 163–178.

Advocates a “liberal” (against a narrow) conceptualization of social mechanism reasoning, according to which the search for meaningful “bivariate correlations” represents a fruitful first step in a social mechanism explanation. Also convincingly argues that social mechanism and causal reasoning need not be rivals.

### **The Micro-Macro Link**

Schelling 1978 is an impressive illustration for how macro outcomes can be the unintended consequence of very simple micro-level mechanisms. One of the first collections of authoritative contributions by eminent rational choice scholars to the micro-macro debate in sociology is Hechter 1983. Huber 1991 traces the further development of this debate. Wippler and Lindenberg 1987 outlines many of the key ideas on social mechanisms and the micro-macro link that would later become standard tools in the field.

Hechter, M., ed. 1983. *The microfoundations of macrosociology*. Philadelphia: Temple Univ. Press. [ISBN: 9780877222989]

A foundational contribution to the micro-macro debate in sociology. Contains chapters with case studies on specific social phenomena (e.g., group cohesion in contemporary Japan, political regionalism in France), and theoretical analyses of group solidarity, institutional change, the causes of strikes, or Polanyi’s social theory.

Huber, J., ed. 1991. *Macro-micro linkages in sociology*. Newbury Park, CA: SAGE. [ISBN: 9780803934580]

Published by the American Sociological Association, this edited volume contains contributions from both rational choice scholars and sociologists working with other paradigms. Very useful for comparing different theoretical views of the problem.

Schelling, T. C. 1978. *Micromotives and macrobehavior*. New York: W.W. Norton. [ISBN: 9780393057010]

This book by the 2005 Nobel Prize laureate is famous for its agent-based simulation study of segregation dynamics, showing how already a very slight preference for living close to others who are similar results in highly segregated neighborhoods. Also a highly readable introduction to the micro-macro problem.

Wippler, R., and S. Lindenberg. 1987. Collective phenomena and rational choice. In *The micro-macro link*. Edited by J. C. Alexander, B. Giesen, R. Münch, and N. J. Smelser, 135–152. Berkeley: Univ. of California Press. [ISBN: 9780520057869]

Probably the first full-fledged exposition of the structure and sociological implications of social mechanism reasoning. Introduces a wealth of analytical tools that have become part and parcel of the toolkit of rational choice sociologists, in particular, the notions of bridge assumptions and the transformation problem.

### **Goals and Preferences**

Probably one of the most controversial and most misunderstood elements of the rational choice approach concerns its assumptions about human nature (or “model of man” in older parlance). Adam Smith, the author of *Wealth of Nations* (1776) and *The Theory of Moral Sentiments* (1759), is usually associated with the idea that humans have an innate tendency “to barter and trade” and that societal welfare is the result of free exchange and competition between selfish individuals. The latter is also captured by the metaphor of the market as the “invisible hand,” which is discussed mainly in his *Wealth of Nations* (Smith 2010, Book 1, chapter 7). This idea strongly influenced neoclassical economics. Far less attention is paid to the fact that in his *Theory of Moral*

*Sentiments*, Smith elaborates a model of human nature that is far more refined. For example, he considers the motive to be a respected member of a community as a major source of social pressure affecting individual behavior. The imbalanced reception of the two books in economics may be due to the fact that markets are not discussed in the *Theory of Moral Sentiments* and that the concept of capitalism is completely absent. Subsequent scholarship in economics virtually neglected the more complex behavioral model in the *Theory of Moral Sentiments*. Modern microeconomics is still silent on the goals and preferences of actors, and, therefore, it faces difficulties when critics point toward the potentially tautological nature of its micro foundation. Key contributions to this debate on “preferences” are Stigler and Becker 1977, representing the position of economics, and Hechter 1992, Hechter 1994, Krackhardt 1998, and Kanazawa 2001, offering a sociological take on the problem. Sociological rational choice theory took it as a point of departure to work toward a refined model of human nature (Lindenberg 1985, cited under \*General Overviews\*). Frank 1988 is a work written by one of the first economists to advocate the incorporation of emotions into economic analysis. A more recent work, Fehr and Gächter 2002 introduces the notion of “altruistic punishment,” and it is based on the authors’ experimental findings that humans are willing to invest heavily in sanctioning free riders, whereas Lindenberg 2013 stresses that a more realistic model of choice requires consideration of the limited self-regulating capacities of human beings.

Fehr, E., and S. Gächter S. 2002. Altruistic punishment in humans. *Nature* 415:137–140.

This key text in research on cooperation argues that much cooperation between genetically unrelated individuals cannot be explained by principles of kin selection, reciprocal altruism, or selfish motives. Instead, negative emotions toward defectors trigger the motive to punish them, even if this requires some costly investments. Available \*online[<http://www.nature.com/nature/journal/v415/n6868/abs/415137a.html>]\* by purchase or subscription.

Frank, R. H. 1988. *Passions within reason*. New York: Norton. [ISBN: 9780393026047]

An accessibly written book on the strategic role of emotions. Discusses possible solutions to the paradox that “the conscious pursuit of self-interest is incompatible with its attainment” (p. ix).

Contains excellent introductions into the importance and workings of reputations and signaling.

Hechter, M. 1992. Should values be written out of the social scientist’s lexicon? *Sociological Theory* 10.2: 214–230.

One of the few in-depth treatments of how to empirically study values in a rational choice framework. Contains a very useful discussion of four impediments to the study of values, including a reflection on measurement problems. Uses medical advance directive decisions as an illustration.

Hechter, M. 1994. The role of values in rational choice theory. *Rationality and Society* 6.3: 318–333.

Suggests that the standard value assumption of rational choice theory – that actors strive for private and instrumental goods – does not hold when there is imperfect substitutability due to production constraints, role conflict or nonrandom distribution of immanent values.

Kanazawa, S. 2001. De gustibus est disputandum. *Social Forces* 79.3: 1131–1163.

Argues that rational choice theory would benefit from incorporating a theory of values from evolutionary psychology. Suggests that evolutionary reasoning would help resolve some of rational choice theory’s most persistent puzzles, such as high cooperation rates in prisoner’s dilemma situations.

Krackhardt, D. 1998. Endogenous preferences: A structural approach. In *Debating rationality: Nonrational aspects of organizational decision making*, 239–247. Ithaca, NY: Cornell Univ. Press. [ISBN: 9780801433788]

A concise chapter illustrating a simple dynamic formal model of social influence to explain endogenous changes in preferences.

Lindenberg, S. 2013. Social rationality, self-regulation and well-being: The regulatory significance of needs, goals, and the self. In *The handbook of rational choice social research*. Edited by R. Wittek, T. A. B. Snijders, and V. Nee, 72–112. Stanford, CA: Stanford Univ. Press. [ISBN: 9780804784184]

Outlines the key assumptions of an enriched rational choice framework that is able to account for social goals. Argues that rationality should be conceived as an individual's self-regulating ability. Builds on recent insights on the “social brain” to outline the contours of a theory of social rationality.

Smith, A. 2010. *The theory of moral sentiments*. London: Penguin. [ISBN: 9780143105923]

Originally published in 1756. Lays the theoretical and methodological foundation for his later works, including the *Wealth of Nations*. Emphasizes the importance of sympathy, virtue, judgment, custom, and rewards as important drivers of human behavior.

Stigler, G., and G. Becker. 1977. De gustibus non est disputandum. *American Economic Review* 67.2: 76–90.

This key paper argues that preferences are exogenous and stable over time. The framework is illustrated with a model of positive (e.g., taste for music) and negative (e.g., heroin) addictions: The price for music drops the more skill that is acquired to listen to it, whereas the price for euphoria increases with the consumption of the drug.

## **Bounded Rationality**

Efforts toward refinements relate to different domains of the rational choice model. Early attempts emphasized limited information-processing abilities, and researchers coined the by now widely used term of bounded rationality (Simon 1955). Bounded rationality conceptions are still very influential (Jones 1999), and the idea that many decisions actually are guided by the use of “fast and frugal” heuristics is increasingly accepted (Todd and Gigerenzer 2000). Bounded rationality research does not fundamentally question selfishness motives. However, much psychological research demonstrates that this assumption does not stand against cumulating empirical evidence (Shafir and LeBoeuf 2002). Rational choice research received a major impulse through research on preferences. This research refines the assumption that humans have selfish preferences and that assuming selfish preferences yields satisfactory modeling results. Kahneman and Tversky 1979, a pathbreaking experiment showing that losses have a far greater impact on preferences than gains of the same amount, lays the foundation for a whole branch of experimental research that studies “framing effects.”

Jones, B. D. 1999. Bounded rationality. *Annual Review of Political Science* 2.1: 297–321.

Very useful summary of the key assumptions of, and criticisms against, the rational choice model based on research in behavioral decision theory and information theory. Discusses several applications of bounded rationality reasoning in political science, including incremental budgeting, organizational routines, and policy agendas.

Kahneman, D., and A. Tversky. 1979. Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the Econometric Society* 47.2: 263–291.

Very influential article containing the famous “Asian Disease” framing experiment, in which decision situations with identical outcomes yield strikingly different outcomes when presented

in terms of a loss or a gain. The expectation of losses makes subjects more risk seeking, suggesting that humans have asymmetrically S-shaped utility functions.

Shafir, E., and R. A. LeBoeuf. 2002. Rationality. *Annual Review of Psychology* 53.1: 491–517.

Summarizes main findings from the psychological sciences concerning violations of the canonical rational choice model (including reasoning, judgment, emotions, choice, and dual-process models). Concludes that objections against these findings are not grounded, suggesting that a critique of the standard rational choice model is compelling.

Simon, H. 1955. A behavioral model of rational choice. *Quarterly Journal of Economics* 69.1: 99–118.

A key text in the field that lays the foundation for what later would become known as “bounded rationality.” Argues that rational choice models should take into account the fact that individuals face informational constraints and limited cognitive computational capacities.

Available \*online[<http://www.jstor.org/stable/1884852>]\* by purchase.

Todd, P., and G. Gigerenzer. 2000. Précis of simple heuristics that make us smart. *Behavioral and Brain Sciences* 23.5: 727–780.

A useful summary of the authors’ pathbreaking refinement of the bounded rationality model. Argues that humans use simple heuristics to cope with limited cognitive, informational, and temporal resources, such as one-reason decision making, elimination models, or satisficing heuristics. Argues that these heuristics outperform more complex “rational” decision making.

## Learning

One important standard assumption of rational choice models is that actors are “forward looking”: They make their choices based on expected future payoffs. A series of important contributions broadening this assumption show that rational choice models can also be formulated based on the assumption that actors are (also) “backward looking.” Two models and their applications are particularly important in this context: Macy’s stochastic learning model (see Macy 1990, Macy 1991, and Macy and Flache 2002) and Nowak and Sigmund’s PAVLOV strategy (see Nowak and Sigmund 1993 and Macy 1995). This win-stay, loose-shift approach was found to be the first one to outperform the very successful tit-for-tat strategy. Kanazawa 1998 and Kanazawa 2000 apply both models to the domain of collective action and voter turnout.

Kanazawa, S. 1998. A possible solution to the paradox of voter turnout. *Journal of Politics* 60.4:974–995.

Adapts Macy’s stochastic learning model to explain why rational actors contribute to the public good of electoral outcomes despite the impact of their vote being negligible. Suggests that past correlations between choice and collective action outcome guide voter’s decision whether or not to vote. Analyses of the American National Election study support the argument.

Kanazawa, S. 2000. A new solution to the collective action problem: The paradox of voter turnout. *American Sociological Review* 65.3: 433–442.

Applies the win-stay, lose-shift (Pavlov) model to the paradox of voter turnout. Assumes that voters interpret outcomes of previous votes as reinforcers or punishers. Empirical tests with General Social Survey data indicate that turnout decisions are in line with the Pavlov strategy if there are no strong third-party candidates. Available \*online[<http://www.jstor.org/discover/10.2307/2657465?uid=2129&uid=2&uid=70&uid=4&sid=56057443243>]\* by purchase.

Macy, M. W. 1990. Learning theory and the logic of critical mass. *American Sociological Review* 55.6: 809–826.

Reformulates critical mass theory as a stochastic learning model that relaxes rationality assumptions as well as assumptions about decisions as isolated events, deterministic outcomes, and joint supply of public goods. Computer simulations show normative solidarity as an outcome rather than a cause of critical mass. Available \*online[<http://www.jstor.org/stable/2095747>]\* by purchase.

Macy, M. W. 1991. Learning to cooperate: Stochastic and tacit collusion in social exchange. *American Journal of Sociology* 97:808–843.

Reformulates the prisoner's dilemma as a stochastic learning model. Computer simulations of the two-person game show that backward-looking actors end up in social traps more easily than forward-looking actors, but they also succeed better in subsequently leaving the trap. Also analyzes the interplay with network effects (size, density, mobility, anonymity) for the n-person game.

Macy, M. W. 1995. PAVLOV and the evolution of cooperation: An experimental test. *Social Psychology Quarterly* 58.2: 74–87.

Subjects the win-stay, lose-shift (Pavlov) strategy in Nowak and Sigmund 1993 to experimental tests in the lab with human subjects. Findings show that cooperation is rarely unconditional and, indeed, supports conditional strategies such as Pavlov and tit-for-tat.

Macy M. and A. Flache. 2002. \*Learning dynamics in social dilemmas[<http://www.pnas.org/content/99/suppl.3/7229.full>]\*. *Proceedings of the National Academy of Sciences of the USA* 99.7: 229–236.

Suggests a formal learning model (“backward looking rationality”) to solve the problem of bounded “forward looking” rationality. Also an excellent illustration of how agent-based modeling can be used to identify solutions. Simulation experiments show that habituation tends to destabilize cooperation.

Nowak, M., and K. Sigmund. 1993. A strategy of win-stay, lose-shift that outperforms tit-for-tat in the prisoner's dilemma game. *Nature* 364:56–58.

Uses computer tournaments between different strategies to show that the win-stay, lose-shift (or PAVLOV) strategy (repeat choices whose outcomes are rewarding, otherwise switch) outperforms tit-for-tat. Unlike the latter, Pavlov can correct occasional mistakes and exploit unconditional cooperators, preventing unconditional cooperators, who, in turn, attract defectors, to invade Pavlov populations. Available \*online[<http://nature.com/doi/10.1038/364056a0>]\* by subscription or purchase.

### **Incomplete Information**

Several rational choice models explicitly tackle the problem of incomplete information in situations in which individual decision makers are interdependent. Some of the most important breakthroughs in the field have been made in this domain: both Akerlof and Spence received the Nobel Prize in Economics in 2001 (together with Joseph Stiglitz). George Akerlof's work provided a major impulse for the proliferation of agency theory (Akerlof 1970). Though information asymmetries and the related moral hazard problems between exchange partners characterize a large variety of contexts, this theory has found followers particularly among organization scholars. Michael Spence's work (Spence 1973) on signaling was inspired by a labor market problem: how can potential employers reliably determine the real quality and motivation of a job applicant? Key ideas from his signaling theory have been applied to many other problems outside economics. In sociology, Gambetta's work, in particular, has contributed to the proliferation of signaling theory (Bacharach and Gambetta 2003).

Akerlof, G. A. 1970. The market for “lemons”: Quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84.3: 488–500.

A foundational contribution on the principal-agent problem. Uses the example of the used car market to explicate how asymmetric information between buyers and sellers about the quality of the product can lead to moral hazard and may ultimately induce owners of good cars not to put their cars on the used car market (“the bad driving out the good”). Available \*online[<http://www.jstor.org/stable/1879431>]\* by purchase.

Bacharach, M., and D. Gambetta. 2003. Trust in signs. In *Trust in society*. Edited by K. Cook, 148–184. New York: Russell Sage Foundation. [ISBN: 9780871541819]

Develops a detailed framework for sociological applications of signaling theory. Clarifies concepts and offers an analytical structure to identify signaling problems in social situations.

Spence, M. 1973. Job market signaling. *Quarterly Journal of Economics* 87.3: 355–374.

Addresses the problem that the quality of a product can often not be determined through direct observation. Observers, therefore, need to rely on indirect “cues” to determine quality. Offers the example of the educational credentials of job seekers as a reliable signal for potential employers. Available \*online[<http://www.jstor.org/stable/1882010>]\* by purchase.

## Social Dilemmas

Social dilemmas are situations in which cooperation would be beneficial, but where it is individually rational to defect. Hardin 1968 provides probably one of the best-known illustrations of this problem. Much, though not all, social dilemma research in rational choice theory uses game theory as its main analytical tool. The workhorse of social dilemma researchers is the “prisoner’s dilemma” (Kuhn 2009), though the range of social dilemma problems is much larger (Heckathorn 1996). A modern classic on the prisoner’s dilemma is Axelrod 1984. A very creative recent application is Simpson 2003, dealing with sex differences in cooperation, in which experimental outcomes in the prisoner’s dilemma are compared to other dilemmas. Recent experimental research also relies heavily on the so-called ultimatum or dictator game (Güth, et al. 1982). Somewhat underutilized, though particularly relevant for sociology, is the volunteer’s dilemma (Diekmann 1985).

Axelrod, R. 1984. *The evolution of cooperation*. New York: Basic Books. [ISBN: 9780465021222]

Famous for its computer tournaments in which different strategies to generate the highest payoff in a prisoner’s dilemma were played against each other. The winning strategy was “tit-for-tat.” Also contains descriptions of a wide variety of real-life situations (from bacteria and birds to trench warfare during World War I) in which these findings apply.

Diekmann, A. 1985. Volunteer’s dilemma. *Journal of Conflict Resolution* 29.4: 605–610.

Introduces the volunteer’s dilemma, which differs from other social dilemmas in that there is no dominant strategy. Analyses of different solution concepts yield contradicting predictions. Available \*online[<http://www.jstor.org/stable/174243>]\* by purchase.

Güth, W., R. Schmittberger, and B. Schwarze. 1982. An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior & Organization* 3.4: 367–388.

Among the first serious experimental tests of cooperation in the ultimatum game, where one party can propose a division of payoffs that the other party then can either accept or reject. Finds that subjects’ decisions are guided by fairness considerations and the motive to punish exchange partners violating distributive justice expectations. Available \*online[<http://www.sciencedirect.com/science/article/pii/0167268182900117>]\* by purchase.

- Hardin, G. 1968. \*The tragedy of the commons[<http://www.sciencemag.org/content/162/3859/1243.full>]\*. *Science* 162.3859: 1243–1248. A highly influential essay that stimulated the debate on sustainability. Argues that unrestrained rational pursuit of individual gain results in overexploitation of (natural) resources. Discusses the problems of how to devise viable institutions to effectively govern the commons.
- Heckathorn, D. D. 1996. \*The dynamics and dilemmas of collective action[[http://www.jsmf.org/meetings/2008/july/ASR96\\_Heckathorn.pdf](http://www.jsmf.org/meetings/2008/july/ASR96_Heckathorn.pdf)]\*. *American Sociological Review* 61.2: 250–277. Presents a theoretically exhaustive inventory of social dilemmas in collective action. Very helpful in understanding how different types of social dilemmas (e.g., prisoner’s dilemma, assurance game, chicken game) can be derived as a function of only two dimensions: the shape of the production function and the relative value of the public good.
- Kuhn, S. 2009. \*Prisoner’s dilemma[<http://plato.stanford.edu/archives/spr2009/entries/prisoner-dilemma/>]\*. In *The Stanford encyclopedia of philosophy*. Edited by Edward N. Zalta. [class:dataSetItem-database] Of the many treatments and descriptions of the prisoner’s dilemma, this one is among the very few that succeeds both in being accessibly written and in providing a thorough overview of this essential analytical tool. Carefully introduces complexity in a stepwise manner and avoids technical jargon.
- Simpson, B. 2003. Sex, fear, and greed: A social dilemma analysis of gender and cooperation. *Social Forces* 82.1: 35–52. Tackles earlier findings showing that sex has no effect on cooperation in social dilemmas. Hypothesizes that because men and women respond differently to greed and fear, cooperation rates should differ in pure greed dilemmas, but not in prisoner’s dilemmas, because the latter mixes fear and greed. Experimental studies support this. Available \*online[<http://www.jstor.org/stable/3598137>]\* by purchase.

## **RATIONAL CHOICE STRUCTURALISM**

Rational choice scholars have made significant contributions to the field of social network analysis, a field that for a long time has been criticized for its weak action theoretical foundation. Important groundwork in tackling this criticism was done in the late 1970s, when scholars found ways to combine exchange theory and social network analysis (Cook and Whitmeyer 1992). Cook and Emerson 1978 and Skvoretz and Willer 1993 provide a good overview of key issues, experimental paradigms, and theoretical frameworks of, respectively, power-dependence and network-exchange theory. This research built on a simple actor model, restricted to empirical tests in a laboratory setting, in which actors strive for rewards and try to avoid punishment and which assumes exchange structures are given. Subsequent research gradually lifted these constraints. Raub and Weesie 1990 also considers network structures as given, but the authors introduce strategic rationality to elaborate a formal game theoretic model of network effects (i.e., reputation) on efficiency of bilateral exchanges. Kollock 1994, also using a reputation framework, is authored by one of the first to experimentally study the emergence of exchange structures. Burt 1992, a highly influential work on structural holes, builds on a straightforward rational choice actor model of brokerage power but tests it with social network data in a variety of real-life settings. Buskens and van de Rijt 2008 adds a formal game theoretical model on the long-term collective level outcomes if everyone strives for structural holes. Scope for the empirical study of network dynamics was significantly enlarged with Snijders 2001, which deals with stochastic actor-oriented models and the related statistical tools to model the evolution of social networks.

- Burt, R. S. 1992. *Structural holes: The social structure of competition*. Cambridge, MA: Harvard Univ. Press. [ISBN: 9780674843721]  
 Develops and empirically tests a network theory of competition. Assumes that actors can derive control and information benefits from exploiting brokerage positions in exchange structures. Applies simple cost-benefit reasoning to develop a set of measures to assess the social capital value of social ties. Extremely influential for network research, in particular, in organization science.
- Buskens, V., and A. van de Rijt. 2008. Dynamics of networks if everyone strives for structural holes. *American Journal of Sociology* 114.2: 371–407.  
 Presents a refined game theoretical model of Burt’s structural hole argument. Their formal analysis and simulation studies confirm the hypothesis that, in the long run, none of the involved actors will be able to maintain a structural advantage if everyone strives for structural holes. Available \*online[<http://onlinelibrary.wiley.com/doi/10.1111/0081-1750.00099/abstract>]\* by subscription or purchase.
- Cook, K. S., and R. M. Emerson. 1978. Power, equity and commitment in exchange networks. *American Sociological Review* 43.5: 721–739.  
 Disentangles economic and sociological analysis of dyadic exchange and argues that, to explain power difference, the study of larger exchange structures is required. Uses experimental research to show that power use is a function of position in an exchange structure and that fairness and equity concerns limit power use. Available \*online[<http://www.jstor.org/stable/2094546>]\* by purchase.
- Cook, K. S., and J. M. Whitmeyer. 1992. Two approaches to social structure: Exchange theory and network analysis. *Annual Review of Sociology* 18:109–127.  
 This useful overview discusses and compares the actor assumptions of different exchange theoretical and network analytical approaches. Argues that these are largely compatible, but that the main difference consists in how they conceive the nature of the ties, with exchange theory emphasizing the exchange value and network analysis emphasizing the importance of their content. Available \*online[<http://www.jstor.org/stable/2083448>]\* by purchase.
- Kollock, P. 1994. The emergence of exchange structures: An experimental study of uncertainty, commitment, and trust. *American Journal of Sociology* 100.2: 313–345.  
 One of the first attempts at combining social exchange theory and work on social dilemmas to explain the emergence of exchange structures. Explores how variations in the degree of uncertainty and reputation affect commitment (the tendency to remain with a partner despite a better offer). Available \*online[<http://www.jstor.org/stable/2782072>]\* by purchase.
- Raub, W., and J. Weesie. 1990. Reputation and efficiency in social interaction: An example of network effects. *American Journal of Sociology* 96.3: 626–654.  
 One of the first applications of game theory to analyze reputation effects as they result from social network embeddedness. Shows that such embeddedness—the possibility to receive information about one’s exchange partners from third parties—facilitates “efficiency” in social interactions between individually rational agents. Also an excellent example for gradual buildup of complexity in model building. Available \*online[<http://www.jstor.org/stable/2781066>]\* by purchase.
- Skvoretz, J., and D. Willer. 1993. \*Exclusion and power: A test of four theories of power in exchange networks[<http://www.dklevine.com/archive/refs42010.pdf>]\*. *American Sociological Review* 58.6: 801–818.  
 A careful theoretical analysis and empirical evaluation of the relative predictive power of core theory, equidependence theory, exchange-resistance theory, and expected value theory. All four

assume rational self-interest, but the latter three add social psychological assumptions about embeddedness when predicting the distribution of power in exchange networks.

Snijders, T. A. B. 2001. The statistical evaluation of social network dynamics. *Sociological Methodology* 31.1: 361–395.

These models allow a very flexible specification also of very complex actor preferences and constraints. The so-called SIENA model and the related software, meanwhile, constitute a standard tool to analyze network dynamics.

## RATIONAL CHOICE INSTITUTIONALISM

Particularly since the 1990s, rational choice scholars have rediscovered institutions— “the rules of the game.” The Nobel Prizes in economics for Douglass North in 1993 and for Oliver Williamson and Elinor Ostrom in 2009 contributed to the growing popularity of rational choice institutionalism, and the work of these scholars even gave birth to what is now known as the “new institutionalism” in sociology (Brinton and Nee 1998). Rational choice institutionalism is particularly strong in three domains: historical research (Kiser and Hechter, 1998, cited under **\*\*Social Mechanisms\*\***), which is related, in particular, to issues of institutional change and economic development (North 1990, Greif 2006); research on governance and institutional design (Ostrom 1990, Williamson 1975); and research on social norms (Hechter and Opp 2001), in particular, their emergence (Centola, et al. 2005; Kitts 2006).

Brinton, M., and V. Nee, eds. 1998. *The new institutionalism in sociology*. New York: Russell Sage Foundation. [ISBN: 9780871541390]

Fourteen chapters providing a rich illustration of rational choice–inspired institutional explanations. Ample treatment of the impact of social norms, institutional change, and economic institutions of capitalist societies. Covers a broad spectrum of empirical applications ranging from rural institutions in preindustrial England to Japanese labor markets.

Centola, D., R. Willer, and M. Macy. 2005. The emperor’s dilemma: A computational model of self-enforcing norms. *American Journal of Sociology* 110.4: 1009–1040.

An excellent example for the strength of rational choice theory to model micro-macro transitions. Investigates under which conditions norms that are fiercely supported by a small minority, but that are rejected by the majority, are sustainable. Uses agent-based models to show that sustainability of the unpopular norm decreases with network embeddedness.

Greif, A. 2006. *Institutions and the path to the modern economy: Lessons from medieval trade*. Cambridge, UK: Cambridge Univ. Press. [ISBN: 9780521480444]

A fascinating and highly original combination of game theory, institutional analysis, and historical research. The comparison between Maghribi and Genovese traders’ solutions of the agency problems in long-distance trade is particularly appealing for the way it links cultural context and rational actor assumptions.

Hechter, M., and K. D. Opp, eds. 2001. *Social norms*. New York: Russell Sage Foundation. [ISBN: 9780871543547]

Thirteen chapters organized in three parts, addressing (1) disciplinary perspectives on social norms (economics, legal studies, sociology, and game theory), (2) norms in social context (e.g., American journalism, protest norms, marriage norms), and (3) the emergence of social norms.

Kitts, J. A. 2006. Collective action, rival incentives, and the emergence of antisocial norms. *American Sociological Review* 71.2: 235–259.

Uses agent-based modeling to explore how centralized sanctions (selective incentives) and informal norms (peer pressure) interact in bringing about collective action. Shows under which

conditions incentives can lead to antisocial norms and decreasing contributions to the collective good.

North, D. C. 1990. *Institutions, institutional change and economic performance*. Cambridge, UK: Cambridge Univ. Press. [ISBN: 9780521394161]

This highly influential book argues that institutions come into being to manage the uncertainties resulting from human interaction. Discusses how institutions should be integrated into neo-classical economic theory. Analyzes implications for modeling institutional change and path dependency in economic development.

Ostrom, E. 1990. *Governing the commons: The evolution of institutions for collective action*. Cambridge, UK: Cambridge Univ. Press. [ISBN: 9780521371018]

Develops an institutional approach to the study of self-organization and self-governance in common pool resource situations. Drawing on empirical field research on communal tenure in meadows, irrigation communities, and fisheries, Ostrom develops design principles by which solutions of the related collective good problems become viable.

Williamson, O. 1975. *Markets and hierarchies: Analysis and antitrust implications*. New York: Free Press. [ISBN: 9780029353608]

A key text elaborating the main assumptions of transaction cost theory. Argues that transactions requiring relation-specific investments (asset specificity) are more likely to be governed by “relational contracts” within a hierarchy (firm) than in a market.

## **SELECTED APPLICATIONS OF RATIONAL CHOICE THEORY**

Rational choice reasoning has informed model building as well as empirical research in almost all subdisciplines of the social and behavioral sciences. This wide scope is in line with the theory’s aspiration of being able to provide a general theory of action that can be broadly applied to a large variety of social problems and phenomena. Many tend to associate the rational choice approach with formal (mathematical) model building and research designs using laboratory or computer experiments (e.g., Macy and Sato 2002). Though this is indeed a realm in which rational choice models are often applied, many other studies have demonstrated that the approach can also fruitfully be used in combination with other research designs, such as organizational (Blau 1955) and community (Ellickson 1991) ethnographies, (historical) case study research (Hechter 1988, Hovil and Werker 2005), or the use of multiple key informants (de Mesquita and Stokman 1994). These examples also show that formal mathematical model building is by no means a necessary requirement to develop a good rational choice explanation.

Blau, P. M. 1955. *The dynamics of bureaucracy: A study of interpersonal relations in two government agencies*. Chicago: Univ. of Chicago Press.

Combines rational choice assumptions with ethnographic and sociometric data on two government agencies to develop an exchange model of informal organizational structures. Employees who are less experienced trade deference for professional advice by their more experienced colleagues.

de Mesquita, B. B., and F. N. Stokman. 1994. *European Community decision making: Models, applications, and comparisons*. New Haven, CT: Yale Univ. Press. [ISBN: 9780300057591]

Argues that three variables suffice to make reliable predictions of the outcomes of collective decision making: the potential control of actors over outcomes, the salience of the issues for the actors, and the outcomes preferred by the actors. Uses empirical data on twenty-two policy issues to assess the predictive power of such models.

Ellickson, R. 1991. *Order without law: How neighbors settle disputes*. Cambridge, MA: Harvard Univ. Press. [ISBN: 9780674641686]

Using in-depth case material from a county in the United States, Ellickson develops a theory of informal social control in close-knit local communities. Suggests that in such settings, “welfare maximizing norms” guide the selection of controllers and the use of direct versus indirect formal and informal control strategies.

Hechter, M. 1988. *Principles of group solidarity*. Berkeley: Univ. of California Press. [ISBN: 9780520064621]

Develops a rational choice model of solidarity and analyzes how (inter-) dependence, rules, and formal control affect cooperation. Applies the theory to different settings, such as political parties, rotating credit associations, firms, insurance groups, and intentional (i.e. deliberately planned) communities.

Hovil, L., and E. Werker. 2005. Portrait of a failed rebellion: An account of rational, sub-optimal violence in western Uganda. *Rationality and Society* 17.1: 5–34.

An original application of signaling theory to explain the high incidence of anti-civilian violence by rebels, based on a case study of civil war in western Uganda. Argues that the excessive use of violence is the most credible signal that insurgents can use to signal to outside financiers their commitment to the rebellion.

Macy, M. W., and Y. Sato. 2002. \*Trust, cooperation, and market formation in the US and Japan[<http://www.pnas.org/content/99/spuul.3/7214.full>]\*. *Proceedings of the National Academy of Sciences of the United States of America* 99.Suppl. 3: 7214–7220.

The point of departure is cumulative empirical research supporting the counterintuitive finding that trust in strangers is more likely in individualist cultures, such as the United States, than in collectivist cultures, such as Japan. Develops an agent-based model indicating that higher social mobility may explain this pattern.

## **CRITIQUE AND ADVOCACY OF RATIONAL CHOICE THEORY**

The rational choice approach was, and still is, a frequent target of fierce criticism, particularly from outside economics. The fierceness of some of the attacks stems from a reaction to “economics imperialism” as it emerged in the wake of Gary Becker’s “use of an ‘economic’ approach to understand human behavior in a variety of contexts and situations” (Becker 1976, p. 3, cited under \*Social Mechanisms\*)—contexts that were traditionally not studied by economists (e.g., marriage, fertility, social interactions). A more fruitful way to evaluate the strengths and weaknesses of the approach consists in distinguishing between true problems and misconceptions. Unfortunately, many critics of the approach seem to focus on the latter. Some of the most common mistakes in this regard consist in the assumptions that rational choice theory is a unified framework, that it requires the assumption of selfishness, or that it assumes atomized, fully informed decision makers with unlimited capacity to process information. Whereas Coleman and Fararo 1992 attempts to present a balanced account of the approach by presenting both advocacy and critique, the criticism peaked in the mid-1990s after the publication of Green and Shapiro 1994, a frontal attack on the approach. Unlike many other attacks on the rational choice approach, this book is among the few that is written by scholars who are very familiar with the rational choice approach and who avoid inadequate representations of the theory’s core. The ensuing debate, documented in Friedman 1996, only partially resolved the controversy, though it could settle many of the criticisms that were based on misconceptions. Another critical account is presented in Zey 1998, a work in which criticism focuses on applications of the “economic approach” to the study of organizations. Opp 1999 criticizes a narrow conception of the rational choice approach but endorses its main principles. Nevertheless, the fear of being “colonized” by economics continues to fuel contemporary criticism of the approach (e.g., Archer and Tritter 2000).

Archer, M., and J. Tritter, eds. 2000. *Rational choice theory: Resisting colonization*. London: Routledge. [ISBN: 9780415242714]

Argues that definitions of rationality are incomplete and that the individualism assumption would not allow accounting for decisions made by groups. Also states that the assumption of fixed preferences precludes analysis of change and that reductionist strategies of aggregation would not be able to incorporate the impact of culture or structures on decision making.

Coleman, J. S., and T. J. Fararo, eds. 1992. *Rational choice theory: Advocacy and critique*. Newbury Park, CA: SAGE. [ISBN: 9780803947610]

Ten contributions, half of which are critical of the approach. The advocacy papers deal with the question of how to extend the rational choice approach to sociology, e.g., by making its assumptions more realistic (Lindenberg). Critics point to the neglect of emotions (Scheff) or to the tight coupling of micro assumptions and macro theory (Hannan).

Friedman, J., ed. 1996. *The rational choice controversy*. New Haven, CT: Yale Univ. Press. [ISBN: 9780300068214]

A collection of contributions to the debate initiated by the attack in Green and Shapiro 1994 on the approach in political science. A major reply in opposition to Green and Shapiro's contribution was that it constructs a straw man and that it misconceives some of its major arguments.

Green, D., and I. Shapiro. 1994. *Pathologies of rational choice theory*. New Haven, CT: Yale Univ. Press. [ISBN: 9780300059144]

Probably the most prominent attack on rational choice theory. Written by two political scientists, the book argues that little empirical evidence exists to support the approach in the study of collective action, political parties, voting cycles, and prisoner's dilemmas.

Opp, K. D. 1999. Contending conceptions of the theory of rational action. *Journal of Theoretical Politics* 11:171–202.

A careful dissection of arguments for and against wide versus narrow versions of rational choice theory. Takes sides in favor of a wider version, contending that the arguments against it (e.g., tautological, difficulty in measuring preferences, sufficiency of narrow version) do not hold.

Zey, M. 1998. *Rational choice theory and organizational theory: A critique*. Thousand Oaks, CA: SAGE. [ISBN: 9780803951358]

Describes key assumptions of the rational choice approach and analyzes its weaknesses in comparison to "organization theories." Criticism focuses on economic theories of organizations and of rational choice explanations of social relationships.

## **INFORMATIVE POPULARIZATIONS OF RATIONAL CHOICE THEORY**

Several relatively recent high-quality easy reads offer accessible and very stimulating introductions to the "economic approach" to social phenomena. Some works are written by top-level scientists, others by very experienced science writers or journalists with a background in economics. Levitt and Dubner 2005 and Harford 2006 are bestsellers that succeed in offering the reader unexpected interpretations of everyday phenomena by applying standard economic reasoning. In contrast, drawing on their own vast experiences as key researchers in the domain, psychologists Dan Ariely (Ariely 2008) and Daniel Kahneman (Kahneman 2011) provide many examples of the limitations of the standard rational choice model. Finally, Thaler and Sunstein 2008 reflects on the implications that recent findings in behavioral economics and related fields should have for the design of policies and institutions.

Ariely, D. 2008. *Predictably irrational: The hidden forces that shape our decisions*. London: HarperCollins. [ISBN: 9780007256525]

Draws heavily on the vast body of research in behavioral economics carried out by the author and his research team. Focuses on seemingly “irrational” individual-level choice and decision-making behavior.

Harford, T. 2006. *The undercover economist: Why the rich are rich, the poor are poor, and why you can never buy a decent used car*. Oxford: Oxford Univ. Press. [ISBN: 9780195189773]

Ten chapters, spanning such diverse issues as the choice of a location for a coffee bar, prices for fuel, China’s growth, and the link between globalization and pollution, that offer an economic interpretation (the “hidden story”) of these phenomena.

Kahneman, D. 2011. *Thinking, slow and fast*. New York: Farrar, Straus and Giroux. [ISBN: 9780374275631]

Though more scholarly than most popularizations, still very accessibly written. Centers around the key assumption that human decision making can be driven either by deliberate, conscious rational choices or by automatic, effortless impulses. The thirty-eight chapters explore the implications of this assumption.

Levitt, S., and S. Dubner. 2005. *Freakonomics: A rogue economist explores the hidden side of everything*. New York: William Morrow. [ISBN: 9780060731328]

The result of a collaboration between Levitt, a Chicago economist, and Dubner, a *New York Times* journalist. Each of the six chapters is organized around a question drawn from “real life” (e.g., why do drug dealers still live with their moms?”), and then the authors skillfully weave a rational choice explanation into the explanatory narrative.

Thaler, R., and C. Sunstein. 2008. *Nudge: Improving decisions about health, wealth, and happiness*. New Haven, CT: Yale Univ. Press. [ISBN: 9780300122237]

Advocates “libertarian paternalism” to protect citizens from the negative consequences of their own suboptimal choice behavior, which follows from the known “imperfections” of the rational choice model. Presents many thought-provoking examples from a wide variety of policy domains, which range from privatization of social security to school choice.