Trust and Economic Organization

KAREN S. COOK and BOGDAN STATE

Abstract

During the past four decades, the role of trust in the economy has gained increasing attention beginning with economist Kenneth Arrow's contention that trust is the lubricant of the economy increasing efficiency and saving on transactions costs. It is also important in the political realm, facilitating collective action. Robert Putnam, among others, contends that trust, as one component of social capital, is a key factor in the vibrancy of civil society. Both economists and social psychologists have used game theory and experimental methods to investigate trust and reciprocity. A key question remains How is trust maintained in the absence of monitoring, especially in the case of principal–agent relations? Economic historians and anthropologists have identified several mechanisms that serve to facilitate trust-based interactions across space and time. In the context of organizations and management, a wide range of trust-related issues have been explored, especially in the wake of Enron (a company no longer in existence) and the more recent failure of investment banks and other large financial institutions. At the macro-level, Francis Fukuyama, among others, has explored the cultural underpinnings of differences in levels of general trust in various societies and its consequences for economic development. More recently, trust has become a central theme in the study of the sharing economy in which an astonishing array of goods and services is now offered by auction or exchange on the Internet. Detailed research on such enterprises (e.g., eBay, CouchSurfing, and AirBnB) is now possible through the development of computational social science.

THE IMPORTANCE OF TRUST

The role of trust in the economy has received a great deal of attention during the past four decades, originating in part from Arrow's foundational observation in *The Limits of Organization* that trust is a "lubricant" of the economy increasing efficiency and saving on transaction costs. Arrow notes that one of the properties of societies that are less developed economically is the lack of mutual trust, a theme later made central in the well-known book on trust by Francis Fukuyama in which he pursued this line of reasoning in a comparative study of general social trust and its link to economic prosperity in some of the largest countries in the world including, among others, China, Russia, and the United States. Numerous studies have sought to investigate

Emerging Trends in the Social and Behavioral Sciences. Edited by Robert Scott and Stephen Kosslyn.
 ISBN 978-1-118-90077-2.

the specific nature of the role that trust plays in economic activity since the early work of Arrow with an emphasis in the past decade on networks of economic activity and the determinants of trust or confidence in the political institutions that support economic transactions. Parallel research programs have developed across the social sciences to examine dimensions of this topic in a wide variety of settings from the interpersonal domain to the realm of institutions and governments.

TRUST IN ECONOMIC EXCHANGE

To model the economic consequences of individual trust interactions, behavioral economists have produced a number of game-theoretic formalizations of trust and a long list of experimental findings derived from studies using "trust games" (for a review, see Ostrom and Walker, 2003). Social psychologists in sociology have approached the problem of trust from the perspective of social exchange theory using a different set of experimental methods and settings (Cook, 2005; Cook & Cooper, 2003; Molm & Cook, 1995). This work has implications for the study of socially embedded transactions in exchange networks and systems of generalized exchange, common in the "new" economy now being fueled by the Internet.

While the focus of some of this experimental work is dyadic exchange and the networks that connect dyads, much economic activity involves problems related to the role of third parties. Of particular interest is the widespread "principal–agent problem." In the relevant situations, the principal (in effect, the trustor) delegates certain tasks involving representation in an exchange transaction to an agent who acts on her behalf. The problem arises because agents' incentives may conflict with those of their principals. Although contracts often serve to mitigate the potential need for trust, issues of enforceability and comprehensiveness of the contract or negotiated agreement, as well as difficulties in monitoring, limit the extent to which these mechanisms enable principals to maintain control over their agents' actions.

A number of solutions to this problem, some quite innovative, have been documented in findings produced by economic historians and economic anthropologists. Greif (1989), for example, in a well-known study of the Maghribi traders in the eleventh century, illustrates how reputational concerns supported by coalitions that provided relevant information and informal monitoring served to align the incentives of international traders and their representatives across time and space. In the context of relations between Kenyan cattle owners and the seasonal herders on which they depend for their livelihoods, Ensminger (2001) finds that fictive kinship (treating employees as kin) provides another solution to this particular problem of trust when monitoring is virtually impossible. In each case, the economic value of the activity was the driving force in the effort to resolve the trust problem. This important work and a long tradition of similar studies in the social sciences on a wider range of phenomena indicate that norms and institutions are often key to understanding the nature of the underlying trust issues and the limits of the various solutions to problems of trust especially when the stakes are high (Cook, Hardin, & Levi, 2005).

TRUST IN ECONOMIC ORGANIZATIONS

The importance of trust for economic activity goes well beyond individual interactions. Trust within and between organizations has been given increased scrutiny over the past few decades, in particular from management scholars. This growing interest in trust was partially motivated by the shift in many sectors from relatively hierarchical to more horizontal forms of economic organization (Tyler, 2003) and the corresponding rise in networked organizations as well as the increase in economic activity embedded in social networks (DiMaggio & Louch, 1998). Gulati (1995), for example, found that as trust develops, partner firms are likely to shift from carefully specified, equity-based alliances to nonequity alliances in which the possibility of opportunism increases. These alliances are governed less by detailed contracts and more by the expectation that one's partner will act in good faith. Such expectations are highly significant when the relationships between partners extend to networks that extend beyond cultural as well as organizational boundaries.

A great deal of attention has been paid to the role of trust in formal and informal structures of organizations, as well as the implications of trust for effective leadership, for project-based teams, and for organizational citizenship behaviors (Dirks & Ferrin, 2001). Burt and Knez (1996), for instance, illustrate the role gossip plays in amplifying (although not determining) trust and distrust between coworkers, an effect that is particularly strong in the latter case. Trust permeates not only the internal structures of companies and their interfirm alliances but also their relationship with the external environment, both natural and cultural. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), for instance, investigate the link between the level of generalized trust in a country and the performance of government as well as large organizations. They find that low levels of trust are correlated with lower performance and economic growth.

SOCIAL CAPITAL AND INFORMAL INSTITUTIONS

The role of trust in the normative context, which regulates social and economic activity, is also an important ongoing area of inquiry. One influential body of work focuses on the relationship between trust and the concept of *social capital* roughly defined as the resources (not simply economic) an actor can access and mobilize through their social connections. Social capital at the individual level often has significant aggregate effects at more macro levels. As Robert Putnam argues, social capital is important at the community and societal levels because it allows for a more vibrant associational life and more importantly facilitates collective action. Kenneth Arrow argues that the lack of mutual trust represents a loss not only economically but also in the smooth running of the political system, which requires success in collective undertakings.

Trust represents a fundamental mechanism through which social capital comes into being. At the individual level, an actor's success in the social mobilization of resources is contingent on others' trust in the actor, typically conceptualized as trustworthiness. Indeed, as Dasgupta (1989) argues, trust may be considered a concrete resource on which an individual or organization may draw in their economic activity. It can facilitate job seeking (Granovetter, 1973) and the acquisition of social support (Small, 2004), as well as various forms of assistance in times of need. At the societal level, the successful mobilization of resources through social ties represents one of the essential ingredients for a functional economy. Sociologists and political scientists often argue that it is the breakdown of social capital and the community it fosters that results in increases in violence and criminal activity typically in urban areas (Hagan & McCarthy, 1997; Rose & Clear, 1998). Such activity clearly has an effect on economic enterprises and productivity, more broadly.

Particularly important in this context is the trust individuals have in unknown (or little-known) others, a situation often typical of economic activity. A number of surveys (e.g., the World Values Survey and the European Social Survey) have revealed wide differences in the extent to which individuals in different countries report trusting strangers, a metric also known as general or "generalized" trust. Confirming the theoretical assumptions of the social capital literature, macroeconomic studies have established links between political developments, economic growth, and the level of generalized trust in a country (Knack & Keefer, 1997), and have even posited the existence of a "low-trust poverty trap" (Knack & Zak, 2003).

In addition to the secular trend of overall decline, the Great Recession has taken its toll on current levels of institutional trust. In an analysis of multiple survey measures of trust in economic and political institutions in the United States and around the world, Stevenson and Wolfers (2011) indicate that institutional trust has declined during the Great Recession (2008–2009), manifesting an inversely proportional relationship to the unemployment rate. As unemployment rises, institutional trust declines.

Research also reveals significant differences in the extent to which different sociodemographic groups trust others. In the United States, Alesina and La Ferrara (2002), for instance, find that economically disadvantaged groups, as well as racial minorities and women, are less likely to trust others, but that neither religion or ethnicity affect trust. Bjørnskov (2008) synthesizes a number of previous studies comparing levels of generalized trust across the world. The emerging pattern of findings in this research shows the Scandinavian countries as having the highest levels of trust in unknown others, followed by the other Western European nations, especially those in the north, with most developing countries having low- or middle-range levels of generalized trust.

Although the findings concerning social capital and generalized trust have been prolific, a few important questions remain largely unanswered. Much research has been devoted to determining what kinds of persons trust others more or less, but far less work has addressed the mechanisms by which the individual propensity to trust others either increases or decreases. Conversely, although the association between generalized trust and economic and political outcomes has been repeatedly documented, the actual causal mechanisms involved require further investigation. New methods of measuring generalized trust and research that documents changes in economic organization over time in relation to key political factors are needed in the future. Survey research has its limits with respect to answering the causal questions that remain unanswered.

TRUST IN ECONOMIC SYSTEMS

Although prolific, trust research has suffered from a somewhat disjointed character, undoubtedly partially due to the interdisciplinary nature of this field of investigation and the lack of efforts to consolidate existing findings. We believe bridging the gap between micro- and macro-level understandings of trust to be one of the essential directions for research in the future. This task is particularly important given the extent to which trust underpins many economic transactions, which the recent economic crisis has so clearly revealed. Especially interesting are some of the formal models currently being developed in computer science and physics, which hold the promise of integrating findings about individual behaviors with those concerning societal patterns of trust.

Steven Marsh provided one of the first formal examinations of trust using computational methods. He attempted to incorporate the disparate insights of the trust research current at that time into a computational model. Other efforts at modeling trust include the work of social scientists, Macy and Skvoretz (1998), who used computer simulation to examine the emergence of trust in a variably embedded Prisoner's Dilemma in networks of neighbors versus strangers, and Abdul-Rahman and Hailes (2000), who proposed a model of trust that incorporated the concepts of reputation and the spread of word-of-mouth information. Spurred by the growing synergy between the computationally intensive disciplines and the social sciences more broadly, formal models of trust have proliferated in the past decade (see Artz & Gil, 2007; Marsh & Dibben, 2005; Sabater & Sierra, 2005; for reviews of the field).

Recent exponential growth in the trust literature, outside of the traditional social sciences, in computer science, physics, and systems engineering highlights the complexity of the trust as well as its importance in society. Formalizing models of trust represents a necessary next step in filling the large gap between micro- and macro-level examinations of the factors that affect economic organization and the activities involved. A number of recent endeavors in the fields of computational social science and complexity theory may foster new insights into the role of trust in society and specifically the global, networked economy.

TRUST AND THE NEW ECONOMY

In addition to the urgency, induced by the Great Recession, of gaining a systemic understanding of the impact of trust on the economy, we also recognize the opportunity presented by what is being called the *Big Data* revolution in the social sciences and the proliferation of web-based peer-to-peer exchange platforms and worlds of online interaction in which trust and reputation play a primary role. Perhaps the most evident example of the central role trust that has come to play in Internet ventures is the now well-established and widely used commercial platform, eBay, which relies on trust between buyers and sellers for the successful completion of transactions, with relatively minimal institutional backing to help guard against opportunism.

However, the role of trust in Internet transactions extends well beyond online auction markets. Collaborative efforts such as Wikipedia, for example, and the open-source movement more generally rely on the trust members have in one another's competence and good intentions. In a study of the Epinions product review website, Guha, Kumar, Raghavan, and Tomkins (2004) showed that the trust scores Epinions users assigned to others' reviews could be predicted easily based on the nature of the preexisting structure of the trust network. Likewise, Leskovec, Huttenlocher, and Kleinberg's (2010) more recent work documents the same pattern of predictability for promotion votes on Wikipedia, arguably a measure of interpersonal trust or confidence in the website.

The past decade has witnessed the emergence of a fairly large number of websites that facilitate the peer-to-peer exchange of highly personalized goods and services, and this segment of the Internet market is growing exponentially. The Internet now allows strangers to exchange hospitality (through CouchSurfing, AirBnB), to share their cars (through ZimRide, RelayRides, SideCar, or digihitch), and even to invest in one another's business ideas (through Kickstarter and Peerbackers) and nonprofit ventures (e.g., Crowdrise). The Internet has clearly facilitated the rapid rise of this new "sharing economy," in which trust occupies a key role. As one of the oldest, and best known, organizations in the sharing economy, CouchSurfing.org, a nonmonetary hospitality exchange service, has received the attention of a number of researchers. Lauterbach, Truong, Shah, and Adamic (2009) provide evidence that CouchSurfing supports the existence of a large system of generalized exchange through their website, with only about 12% of hosting events being directly reciprocated in dyadic exchanges in which surfers actually stay at the home of those they host. This segment of the economy is growing so quickly that companies have built-in social science research teams outside of academia to more fully understand the nature of the market for such services worldwide and to market the information they obtain in the process of facilitating generalized peer-to-peer exchange.

CONCLUSION

In a world in which economic activities are increasingly embedded in social networks that extend around the globe trust in persons as well as institutions matters. Trust in those we purchase blindly from and confidence in the systems that support the peer-to-peer exchange of both goods and services warrant concern and attention not only by those engaged in the economic activity but also by social scientists who can investigate the opportunities and the pitfalls emerging in this "new economy." Increasingly, the boundary between social and economic exchange is being blurred and the organizations and institutions that originally supported arms-length transactions are being circumvented by those that do not—by those that offer direct supplier to consumer (or seller to buyer) connections in almost every realm of valued products and activity.

In our view, this trend will entail closer examination by sociologists, psychologists, and anthropologists as well as economists and political scientists and require more funding to create the types of investigator teams more common in the natural sciences than the social sciences. The extent of these newer forms of economic activity and their reach into the personal, interpersonal, organizational, and institutional arenas is quite far and deep. Thus beyond the traditional study of trust in these domains, understanding the linkages between them is going to become even more important to fully comprehend the interdependencies involved. In addition, with an increasing array of start-ups, Initial Public Offering (IPO)s, transnational organizations, global nonprofits, and Internet-based enterprises, the study of economic activity of all types and the nature of the organization of this activity will require more complex theories and methods of analysis, including those being developed now in computational social science and complexity theory. The fact that trust (in both persons and institutions) has become a central topic of interest across the social sciences in the past few decades is testimony to the rise of the networked economy and the interdependencies it entails that characterize transactions of all kinds and the social systems in which they are embedded. Understanding this enterprise should provide the impetus for interdisciplinary work on economic organization at a scale not yet imagined.

REFERENCES

Abdul-Rahman, A., & Hailes, S. (2000). Supporting trust in virtual communities. 33rd Hawaii International Conference on System Sciences.

Alesina, A., & La Ferrara, E. (2002). Who trusts others? *Journal of Public Economics*, *85*(2), 207–234.

Artz, D., and Gil, Y. (2007). "A survey of trust in computer science and the semantic web." *Web Semantics: Science, Services and Agents on the World Wide Web 5*.2, 58–71.

Bjørnskov, C. (2008). Social trust and fractionalization: A possible reinterpretation. *European Sociological Review*, *24*(3), 271–283.

Burt, R., & Knez, M. (1996). Trust and third-party gossip. In D. M. Messick & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research*. New York, NY: Sage.

Cook, K. S. (2005). Networks, norms, and trust: The social psychology of social capital. *Social Psychology Quarterly*, *68*(1), 4–14.

Cook, K. S., & Cooper, R. (2003). Experimental studies of cooperation, trust, and social exchange. In E. Ostrom & J. Walker (Eds.), *Trust and reciprocity: Interdisciplinary lessons*. New York, NY: Russell Sage Foundation.

Cook, K. S., Hardin, R., & Levi, M. (2005). *Cooperation without trust?* New York, NY: Russell Sage Foundation.

Dasgupta, P. (1989). Trust as a commodity. In D. Gambetta (Ed.), *Trust: Making and breaking cooperative relations* (pp. 49–72). Oxford, England: Department of Sociology, University of Oxford.

DiMaggio, P., & Louch, H. (1998). Socially embedded consumer transactions: For what kinds of purchases do people use networks most? *American Sociological Review*(October), 619–637.

Dirks, K. T., & Ferrin, D. L. (2001). Role trust in organizational settings. *Organizational Science*, *12*(4), 450–467.

Ensminger, J. (2001). Reputations, trust and the principal agent problem. In K. S. Cook (Ed.), *Trust in society* (pp. 186–201). New York, NY: Russell Sage Foundation.

Granovetter, M. (1973). *Getting a job: A study of contacts and careers* (2nd ed.). Chicago, IL: University of Chicago Press.

Greif, A. (1989). Reputation and coalitions in medieval trade: Evidence on the Maghribi traders. *The Journal of Economic History*, *49*(4), 857–882.

Guha, R., Kumar, R., Raghavan, P., & Tomkins, A. (2004). Propagation of trust and distrust. Proceedings of the 13th International Conference on World Wide Web.

Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal*, *38*(1), 85–112.

Hagan, J., & McCarthy, B. (1997). *Mean streets: Youth crime and homelessness*. New York, NY: Cambridge University Press.

Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *Quarterly Journal of Economics*, *112*(4), 1251–1288.

Knack, S., & Zak, P. J. (2003). Building trust: Public policy, interpersonal trust, and economic development. *Supreme Court Economic Review*, *10*, 91–107.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Trust in large organizations. *The American Economic Review*, *87*(2), 333–338.

Lauterbach, D., Truong, H., Shah, T., & Adamic, L. (2009). Surfing a web of trust: Reputation and reciprocity on CouchSurfing.com. 2009 International Conference on Computational Science and Engineering.

Leskovec, J., Huttenlocher, D., and Kleinberg, J. (2010). "Predicting positive and negative links in online social networks." *Proceedings of the 19th International conference on World Wide Web*. ACM, 2010.

Macy, M. W., and Skvoretz, J. (1998). "The evolution of trust and cooperation between strangers: A computational model." *American Sociological Review*, *63*, 638–660.

Marsh, S., & Dibben, M. R. (2005). The role of trust in information science and technology. *Annual Review of Information Science and Technology*, *37*(1), 465–498.

Molm, L. D., & Cook, K. S. (1995). Social exchange and exchange networks. In K. S. Cook, G. A. Fine & J. S. House (Eds.), *Sociological perspectives on social psychology*. Needham Heights, MA: Allyn and Bacon.

Ostrom, E., & Walker, J. (2003). Introduction. In E. Ostrom & J. Walker (Eds.), *Trust and reciprocity: Interdisciplinary lessons*. New York, NY: Russell Sage Foundation.

Rose, D. R., & Clear, T. R. (1998). Incarceration, social capital and crime: Implications for social disorganization theory. *Criminology*, *36*, 441–479.

Sabater, J., & Sierra, C. (2005). Review on computational trust and reputation models. *Artificial Intelligence Review*, *24*(1), 33–60.

Small, M. (2004). *Villa Victoria: The transformation of social capital in a Boston Barrio*. Chicago: The University of Chicago Press.

Stevenson, B., & Wolfers, J. (2011). *Trust in public institutions over the business cycle* (No. w16891.). Cambridge, MA: National Bureau of Economic Research.

Tyler, T. R. (2003). Trust within organizations. *Personnel Review*, *32*(5), 556–568.

FURTHER READING

Zak, P. J., & Knack, S. (2001). Trust and growth. *The Economic Journal*, *111*(470), 295–321.

KAREN S. COOK SHORT BIOGRAPHY

Karen S. Cook (kcook@stanford.edu) is the Ray Lyman Wilbur Professor of Sociology and a Director of the Institute for Research in the Social Sciences (IRiSS) at Stanford. She conducts research on social exchange, social networks, and trust. She has edited a number of books in the Russell Sage Foundation Trust Series, including *Trust in Society* (2001), *Trust and Distrust in Organizations: Emerging Perspectives* (with R. Kramer, 2004), *eTrust: Forming Relations in the Online World* (with C. Snijders, V. Buskens, and Coye Cheshire, 2009), and *Whom Can Your Trust?* (with M. Levi and R. Hardin, 2009). She is a coauthor of *Cooperation without Trust?* (with R. Hardin and M. Levi, 2005). In 1996, she was elected to the American Academy of Arts and Sciences and in 2007 to the National Academy of Sciences. In 2004, she received the ASA Social Psychology Section Cooley Mead Award for Career Contributions to Social Psychology.

She is a trustee of the Russell Sage Foundation and a Coeditor of the *Annual Review of Sociology*.

BOGDAN STATE SHORT BIOGARPHY

Bogdan State (bstate@stanford.edu) is a PhD candidate in the Department of Sociology at Stanford University. He is the graduate assistant for the Trust Project at the Institute for Research in the Social Sciences (IRiSS) at Stanford. In this capacity, he has conducted research on trust in various offline and online settings, the latter including CouchSurfing.org. He has published several papers including *From Power to Status in Online Social Exchange* (WebSci'12, Evanston, IL) and *Studying Inter-National Migrations through IP Geolocation* (WSDM'13, Rome, Italy). He has received the Best Extended Abstract Award at the 2012 ACM Web Science conference. State's doctoral studies are supported by the Joan Butler Ford Stanford Graduate Fellowship.

RELATED ESSAYS

Global Economic Networks *(Sociology)*, Nina Bandelj *et al*.
The Public Nature of Private Property *(Sociology)*, Debbie Becher
Returns to Education in Different Labor Market Contexts *(Sociology)*, Klaus Schöemann and Rolf Becker
Neoliberalism *(Sociology)*, Miguel Angel Centeno and Joseph N. Cohen
Elites *(Sociology)*, Johan S. G. Chu and Mark S. Mizruchi
Stability and Change in Corporate Governance *(Sociology)*, Gerald F. Davis and Johan S. G. Chu
Financialization of the US Economy *(Sociology)*, Gerald (Jerry) F. Davis and Suntae Kim

Institutions and the Economy *(Sociology)*, Carl Gershenson and Frank Dobbin
Global Income Inequality *(Sociology)*, Glenn Firebaugh
Architecture of Markets *(Sociology)*, Neil Fligstein and Ryan Calder
Labor Market Instability, Labor Market Entry and Early Career Development *(Sociology)*, Michael Gebel
Behavioral Economics *(Sociology)*, Guy Hochman and Dan Ariely
Family Formation in Times of Labor Market Insecurities *(Sociology)*, Johannes Huinink
Innovation *(Economics)*, Adam B. Jaffe
Search and Learning in Markets *(Economics)*, Philipp Kircher
Transformation of the Employment Relationship *(Sociology)*, Arne L. Kalleberg and Peter V. Marsden
Economics and Culture *(Economics)*, Gérard Roland
Sociology of Entrepreneurship *(Sociology)*, Martin Ruef
Impact of Limited Education on Employment Prospects in Advanced Economies *(Sociology)*, Heike Solga