

Altruism and Prosocial Behavior, Sociology of

Rafael Wittek, University of Groningen, Groningen, The Netherlands

René Bekkers, Center for Philanthropic Studies, VU University Amsterdam, Amsterdam, The Netherlands

© 2015 Elsevier Ltd. All rights reserved.

This article is a revision of the previous edition article by J.A. Piliavin, volume 1, pp. 411–415, © 2001, Elsevier Ltd.

Abstract

Prosocial behavior involves costs for the self and results in benefits for others. Altruistic acts confer benefits to others, but net costs to the self. Different types of prosocial behavior are distinguished, depending on whether it is enacted by an individual or as part of a group effort, and whether it is first order (direct contributions) or second order (sanctioning) behavior. Six theoretical approaches are outlined (evolutionary, rationalist, structural, institutional, situational, and individual differences). They explain the evolution of prosocial behavior and its variation across groups, contexts, and situations. Avenues for future research are discussed.

Introduction

Prosocial behavior has intrigued scholars for centuries, including prominent academics in the early days of economics, political science, anthropology, and sociology. In the *Theory of Moral Sentiments*, Adam Smith (1759) asked “which principles in his nature interest him in the fortune of others?,” answering that sympathy for the misery of others was the answer. Alexis de Tocqueville (1835) suggested the hypothesis that the possibility to have influence through local democracy motivated the community spirit of Americans. More generally, research on prosocial behavior attempts to explain (1) why and how prosocial behavior evolved in humans and (2) why and how the incidence and forms of prosocial behavior vary across individuals, groups, and situations. The present article presents some of the more recent attempts to answer these questions. Since this article focuses on *sociological* explanations, particular attention is paid to the level of the group or larger collectives as potential antecedents, consequences, or contexts for prosocial behavior and altruism. We will first address some definitional issues and subsequently elaborate on the wide variety of different types of prosocial behavior. This is followed by an overview of different theoretical approaches to prosocial behavior. The article concludes with a digression on open research questions in the sociology of prosocial behavior.

Definitions

Prosocial behavior is a broad class of behavior defined as involving costs for the self and resulting in benefits for others. Where prosocial behavior results in *net* benefits for both the beneficiary and the person committing the prosocial act, it is referred to as *mutualism*. Where prosocial behavior benefits others but confers *net* costs to the person committing it, prosocial behavior becomes *altruism* (Bowles and Gintis, 2011). A common distinction is made between pure altruism and impure altruism. Pure altruism is “acting with the goal of benefitting another” (Piliavin and Charng, 1990); prosocial behavior solely motivated by concern for others, also denoted as ‘altruistic motivation.’ Impure altruism is prosocial behavior motivated by more self-centered motives or even by narrow self-interest, potentially in addition to concern for others. Note that the definition of

prosocial behavior is purely behavioral, while altruism combines behavioral and motivational elements.

Types of Prosocial Behavior

Prosocial behavior can take many different forms, depending on the context in which it takes place; it may benefit specific others, known or unknown and at varying degrees of social distance, ranging from close kin to total strangers; it may benefit social groups of which the actor is a member or not, as well as society as a whole or abstract ideals.

Much specialized research on prosocial behavior can be found, focusing on prosocial behavior in specific societal and institutional contexts. Since this research often uses different labels to denote the phenomenon, reviews of research findings face serious challenges, even within a single discipline. For example, within the field of the sociology of organizations, one specific form of formal prosocial behavior is organizational citizenship behavior, defined as prosocial extra-role behavior by employees of an organization benefiting colleagues or the employer (Podsakoff et al., 1997). Another aspect of prosociality recently studied in a specific organizational setting – public administration – is public service motivation, defined as “an individual’s orientation to delivering services to people with the purpose of doing good for others and society” (Perry et al., 2010). Another challenge results from the fact that the analytical distinctions between the general theoretical constructs used to describe prosocial behavior are not always clear-cut, and seem to vary between disciplines; concepts like cooperation, solidarity, cohesion, collaboration, support, or help are often used as synonyms.

The following more general distinctions are particularly relevant for theory and empirical research. First, prosocial behavior can differ depending on whether it is enacted by an individual or as part of a group effort, and the effects it has on the beneficiary as well as on third parties. Four types of prosocial behavior can be distinguished based on these two dimensions. First, there are prosocial acts carried out by a single individual, benefitting a specific other individual. This ideal typical form is the implicit assumption of most analyses of prosocial behavior. Examples are passers by donating money to a beggar or doing the grocery shopping for your sick neighbor.

Second, there are prosocial acts carried out by a single individual, benefitting a collective or 'generalized other.' Examples are donations by an individual to a charitable organization, or a soldier holding a lost position to enable his squad to retreat, but also less dramatic acts like paying one's taxes. Third, there are prosocial acts carried out by a collective in order to benefit a single individual. Examples are actions targeted to liberate political prisoners by organizations like Amnesty International. Finally, there are prosocial acts carried out by a collective or group, with the intention to help another collective. This kind of prosocial behavior can also be directed to benefit the collective itself. An example would be workers joining a wildcat strike at the risk of being fired (Zetka, 1992).

While benefitting a specific individual or group, prosocial behavior can also have positive or negative consequences for third parties. For example, forms of oppositional solidarity like strikes may benefit the participants, but harm the organization. Conversely, prosocial behavior favoring a specific individual or group may also benefit other groups, as in the case of strikes by a small group leading to pay raises for all employees.

A second important distinction differentiates between formal and informal prosocial behavior. Actions that involve an intermediary organization, like charitable giving, volunteer work for nonprofit organizations, or blood and organ donation are examples of formal prosocial behavior. Social and emotional support to friends and family members, caring for parents and children, or helping strangers are examples of informal prosocial behavior.

Finally, in settings of collective good production, first and second order prosocial behavior needs to be distinguished (Heckathorn, 1996). First order prosocial behavior consists of acts that directly benefit another individual or group. Second order prosocial behavior consists of acts sanctioning behavior that violates rules about prosocial behavior (Fehr and Gächter, 2002). In both cases, an individual can decide to cooperate or defect, but in the second order case, a third option is to oppose sanctioning of others. In situations of collective good production, the combination of first and second order decisions results in different types of prosocial behavior. Individuals who act prosocially by contributing to first-level collective good production can either be *full cooperators* (if they also sanction free riders who do not contribute to the collective good), *private cooperators* (if they refrain from sanctioning free riders), or become part of the *compliant opposition* by defending "the rights of others to refuse to contribute" (Heckathorn, 1996: 254). Individuals who do not contribute to the collective good at the first level can nevertheless decide to behave prosocially at the second level by sanctioning those who also did not contribute, thereby becoming *hypocritical cooperators*. They can also decide to actively oppose attempts of control by others (*full opposition*), or simply also not sanction free riders (*full defection*).

Theories of Prosocial Behavior

Several broad classes of theories explaining prosocial behavior can be distinguished. They advance different mechanisms to explain why prosocial behavior emerged in humans, and why it varies between individuals, groups, contexts, and situations.

Evolutionary approaches have demonstrated that prosocial behavior toward close genetically related family members

could be the result of natural selection, because it may ultimately help to spread the benefactor's genes. Some scholars, therefore, suggest referring to prosocial behavior toward close relatives not as altruism, but as mutualism (Bowles and Gintis, 2011). A challenge for evolutionary approaches consists in the fact that prosocial behavior often extends far beyond the circle of close relatives. This observation is at the basis of an ongoing debate about human nature, i.e., the degree to and conditions under which human behavior is motivated by selfishness. Five evolutionary mechanisms are assumed to have made humans a cooperative species (Nowak, 2006): kin selection, direct reciprocity, indirect reciprocity, network reciprocity, and group selection. These mechanisms would also explain why we so frequently observe altruistic punishment; since it is an effective instrument safeguarding altruists from being abused, punishment of free riders became an objective in its own right. Along these lines, recent scholarship points to the hard wired character of *social preferences*, i.e., the fact that humans care for the well-being of others. Humans feel guilt and shame if they defect, feel obliged to help, and derive psychological benefits like pleasure and satisfaction from committing prosocial acts (Aknin et al., 2013; Konow and Earley, 2008), even if – or because – this comes at considerable costs. This holds not only for first order prosocial behavior (Jacquet et al., 2011), but also for its second order version; a series of influential experiments has shown that humans not only tend to develop negative emotions against free riders, but are actually willing to incur considerable costs to sanction them (Fehr and Gächter, 2002). Given this cumulative evidence, evolutionary approaches increasingly turn their attention to the question why altruistic preferences became so widespread and 'outcompeted' unrestricted and selfish gain maximization as the major motive guiding human behavior.

Rationalist approaches focus on the puzzle why and under which conditions selfish individuals engage in prosocial behavior. Classical rational choice theories prefer explanations that do not need to assume social preferences, but that stick to the core assumption of gain maximizing individuals. In this perspective, most prosocial acts fall under the category of 'mutualism,' i.e., they benefit both the sender and the target. This is usually the case if the sender and the receiver of the prosocial act are in some form dependent on each other for the acquisition or joint production of valued goods or services. Since the realization of mutual gains often takes place in a sequence of exchanges, the first player acting prosocially usually faces a trust problem, since the benefactor may decide not to reciprocate. We discuss two important ways to solve such trust problems: selective incentives and signaling.

Selective incentives are rewards and punishments designed to induce prosocial behavior. They can have a formal and an informal basis. For example, firms try to elicit prosocial behavior (i.e., extra-role organizational citizenship behavior) through selective incentives in the form of performance-contingent reward schemes, which are assumed to align the interests of the organization with the interest of the employee. But also in primordial social groups, like families, friendship cliques, or other kinds of sharing groups interdependence creates the need for informal norms (Lindenberg, 1997), because individuals have an interest to make sure that the other party acts prosocially toward themselves. Here, selective

incentives may take the form of remedial norms and emerge in a bottom-up process (Ellickson, 1991). Hence, rather than referring to norms as an external cause of prosocial behavior, rational choice theories prefer to 'endogenize' norms by pointing toward structural interdependencies as an underlying root cause (see also the section structural explanations below).

Signals are traits and behaviors that reliably predict someone's trustworthiness (Gambetta, 2009). Signaling is a key mechanism in situations of information asymmetry between two or more parties. Such asymmetries arise where both parties have at least partially conflicting interests, and where reliable and valid information about the quality (e.g., skills, performance) and/or the intentions (e.g., motivation) of one actor is unavailable or difficult to observe for another actor. *Relational signals* are cues about the signaler's intention to initiate or maintain a mutually rewarding relationship with the receiver (Lindenberg, 2003; Wittek, 2003). Individuals who are effective in successfully producing such relational signals will be more likely to attract prosocial acts from other players. The efficacy of a signal depends on a variety of factors (Connelly et al., 2011), in particular their *observability* (intensity, strength, clarity, visibility) and cost. Whereas some signals are easy to observe (e.g., a philanthropist's donation to a humanitarian fund) others are more difficult to decipher (e.g., evolutionary accounts of depression have argued that signs of depression reduce aggressiveness of exchange partners). The *cost* of a signal (e.g., the size of a donation in relation to a philanthropist's capital) has long been considered as a major condition for its efficacy, but more recent accounts deemphasize the importance of costs and suggest that less-costly signals may also be relevant (e.g., a prime minister's apology for atrocities of previous governments). Other aspects of signals are (Connelly et al., 2011: 52) their *fit* ("the extent to which the signal is correlated with the unobservable quality"), their *frequency* ("the number of times the same signal is transmitted"), and their *consistency* ("agreement between signals from one source").

Institutional approaches emphasize the importance of formal rules or informal norms and shared meaning as a root cause of prosocial behavior. In this framework, prosocial behavior does not require some ulterior payoff to the sender, but it can be the result of deeply ingrained cultural schemas, beliefs, values, or identities. Several mechanisms are often associated with institutional explanations of prosocial behavior. First, many scholars consider the *reciprocity* norm as a fundamental trait, which can be found in all human cultures (Mauss, 1954[1923]). The reciprocity norm requires that 'gifts' trigger the obligation to be repaid. This means that individuals receiving a gift from someone will be inclined to behave prosocially toward this person at a later stage (Gouldner, 1960). Reciprocity can take several forms, ranging from direct reciprocity (in which the beneficiary is the individual who provided the gift), to indirect or generalized reciprocity (where the beneficiary may be a third party). Second, institutional approaches consider *learning and socialization* as powerful triggers of prosocial behavior. Third, shared social identities may trigger feelings of in-group obligation and loyalty, which reduce the incentive to free ride (Ellemers et al., 2002).

Structural approaches: Two interrelated strands of research can illustrate this type of explanation. *Social dilemma* studies focus on the structure or 'anatomy' of the cooperation problem

itself, pointing to *negative interdependence* and *scale* as two fundamental structural conditions that systematically affect the incidence of cooperation (Ostrom et al., 1999). The first condition of negative interdependence creates social dilemmas, such as, for instance, the prisoner's dilemma or the 'tragedy of the commons' (Hardin, 1968); everybody will be better off if everyone contributes, while it is individually rational to defect. Second, scale exacerbates free-rider problems, for the higher the *number of participants* (Olson, 1965), the smaller the impact of individual contributions will be on the collective good. Small-scale settings are often considered ideally suited to cooperation, because they guarantee frequent face-to-face contact and stimulate adherence to the social norm (Ellickson, 1991).

Social network researchers have studied how repeated interaction can stimulate individuals to act prosocially toward others. This will be more likely if the parties concerned do have a history of previous exchanges and the prospect of future interactions (Buskens and Raub, 2013). Repeated interaction allows for conditional cooperation and helps to build reputations. Conditional cooperation is considered the simplest solution in a situation of repeated interaction. Reputations about trustworthiness can be built within a dyad, but can also be gathered from third parties through gossiping (Sommerfeld et al., 2007; Ellwardt et al., 2012). Though embeddedness in dense social networks can trigger prosocial behavior (e.g., Flache, 2002), this effect is highly context dependent. For example, self-managed work teams characterized by a high level of trust (i.e., first order prosocial behavior) may score low on second order prosocial behavior, i.e., exhibit a tendency to avoid monitoring and sanctioning noncompliance (Langfred, 2004).

Situational approaches emphasize the power of cues as a trigger for prosocial behavior. Such cues can have their roots in (changes in) the physical or environment an individual is exposed to at a given moment. According to *goal framing theory*, even subtle cues can have strong effects because they activate different types of goal frames, which push either gain, normative, or hedonic motivations into the foreground. For example, a series of field experiments testing the 'broken windows hypothesis' showed that prosocial behavior declines in settings where individuals are exposed to visible signs of rule violations by others, like graffiti on a wall with a 'no graffiti' board (Keizer et al., 2008).

Individual difference approaches argue that independently of the specific institutional context or situation they are in, an individual will consistently cooperate or defect, depending on his or her individual predispositions or personality traits. For example, an experimental study showed that in prisoner's dilemma games individuals with a high internal locus of control, high self-monitoring, and high sensation seeking are more likely to act prosocially than individuals scoring low on these personality traits (Boone et al., 1999). Hence, though confronted with the same situational and institutional setting, there is nevertheless a lot of variation between individuals with regard to their inclination to act prosocially.

Future Directions

The past decade has seen a proliferation of research on prosocial behavior, and much progress has been made in

understanding its sociological implications. We see at least three promising domains for future research.

First, a question that so far received comparatively little attention in the different approaches to prosocial behavior concerns the conditions for *sustainable* cooperation. Institutional approaches still produced limited insights into the conditions needed to create stable sanctioning regimes, or how cooperation is sustained when formal and informal monitoring systems are imperfect. Social preference explanations do not specify under what conditions certain preferences become salient, and why they will remain so. Similarly, experimental studies of iterated N-person dilemmas found that cooperation decreases significantly over time (Ledyard, 1995), starting to wane almost from the start. A stronger focus on the sustainability of cooperative relations and prosocial behavior would also have implications for research designs and evidence-based policy making. For example, with the increasing availability of longitudinal network data and the related statistical models for the analysis of network dynamics (Snijders, 2013), more explicit theorizing on the interrelation between changing social contexts and prosocial behavior becomes possible. Similarly, cumulating evidence on the social basis of human rationality provide new challenges but also opportunities for policy makers facing the challenge to design institutions fostering sustainable cooperation in a variety of settings, like organ donation or tax evasion (Thaler and Sunstein, 2008).

Second, with the growing importance of the World Wide Web for almost all domains of social life, more insight is needed into its effects on prosocial behavior. Internet-based technologies have the potential to reduce coordination and monitoring costs to a minimum, thereby taking away some of the major obstacles that hampered the initiation and maintenance of (large-scale) cooperation. Indeed, growing global interconnectedness is thought to have increased the willingness to contribute to the production of public goods, strengthening as it does a cosmopolitan attitude, while weakening the influence of ethnicity, locality, and national identity (Buchan et al., 2009). Nevertheless, very little is known about such secular trends, and to what degree this technological change affected the emergence of new forms of prosocial behavior and joint production, indeed.

Finally, though the science of cooperation made tremendous progress, sociology can certainly benefit from a more active reception of advances in related fields, particularly those focusing on behavioral microfoundations, like social psychology, behavioral economics, and the cognitive neurosciences. But the same holds for the reception of sociological insights by other fields, particularly for those cases in which physiological or neural processes are presented as ultimate 'causes' of prosocial behavior that are insensitive to changes in social contexts. A nice example is the proliferation of studies on the role of the 'cuddle hormone' or 'love drug' oxytocin as an indiscriminate trigger of prosocial motivations in humans. Instead, a careful recent study, which took the social context serious, found that "oxytocin creates intergroup bias because it motivates in-group favoritism and, to a lesser extent, out-group derogation" (De Dreu et al., 2011: 1). As this and other examples show, there is still much to be gained from more dedicated interdisciplinary work on the sociology of prosocial behavior.

See also: Charity and Philanthropy: Overview; Control, Social; Cooperation and Competition; Cooperation: Sociological Aspects; Evolutionary Sociology; Gift: History of the Concept; Groups, Sociology of; Human Cooperation, Evolution of; Institutions; Interests in Sociological Analysis; Norms; Prosocial Behavior During Adolescence; Prosocial Behavior During Childhood and Cultural Variations; Prosocial Behavior During Infancy and Early Childhood: Developmental Patterns and Cultural Variations; Prosocial Behavior and Empathy; Prosocial Behavior, Effects of Parenting and Family Structure on; Social Dilemmas, Psychology of; Solidarity, Sociology of; Trust, Sociology of; Voluntary Associations, Sociology of.

Bibliography

- Aknin, L.B., Dunn, E.W., Whillans, A.V., Grant, A.M., Norton, M.I., 2013. Making a difference matters: impact unlocks the emotional benefits of prosocial spending. *Journal of Economic Behavior and Organization* 88, 90–95.
- Boone, C., De Brabander, B., Van Witteloostuijn, A., 1999. The impact of personality on behavior in five prisoner's dilemma games. *Journal of Economic Psychology* 20 (3), 343–377.
- Bowles, S., Gintis, H., 2011. *A Cooperative Species: Human Reciprocity and Its Evolution*. Princeton University Press.
- Buchan, N., Grimalda, G., Wilson, R., Brewer, M., Fatas, E., Foddy, M., 2009. Globalization and human cooperation. *Proceedings of the National Academy of Sciences of the USA*. 106 (52), 4138–4142.
- Buskens, V., Raub, W., 2013. Rational choice research on social dilemmas: embeddedness effects on trust. In: Wittek, R., Snijders, T.A.B., Nee, Victor (Eds.), *The Handbook of Rational Choice Social Research*. Stanford University Press, Palo Alto, pp. 113–150.
- Connelly, B., Certo, S., Ireland, R., Reutzel, C., 2011. Signaling theory: a review and assessment. *Journal of Management* 37 (1), 39–76.
- De Dreu, C.K., Greer, L.L., Van Kleef, G.A., Shalvi, S., Handgraaf, M.J., 2011. Oxytocin promotes human ethnocentrism. *Proceedings of the National Academy of Sciences* 108 (4), 1262–1266.
- Ellemers, N., Spears, R., Doosje, B., 2002. Self and social identity. *Annual Review of Psychology* 53, 161–186.
- Ellickson, R.C., 1991. *Order without Law: How Neighbors Settle Disputes*. Harvard University Press, Cambridge, MA.
- Elwardt, L., Labianca, G.J., Wittek, R., 2012. Who are the objects of positive and negative gossip at work? A social network perspective on workplace gossip. *Social Networks* 34 (2), 193–205.
- Fehr, E., Gächter, S., 2002. Altruistic punishment in humans. *Nature* 415 (6868), 137–140.
- Flache, A., 2002. The rational weakness of strong ties. Failure of group solidarity in a highly cohesive group of rational agents. *Journal of Mathematical Sociology* 26, 189–216.
- Gambetta, D., 2009. Signaling. In: Hedström, P., Bearman, P. (Eds.), *The Oxford Handbook of Analytical Sociology*. Oxford University Press, Oxford, pp. 168–194.
- Gouldner, A.W., 1960. The norm of reciprocity: a preliminary statement. *American Sociological Review*, 161–178.
- Hardin, G., 1968. The tragedy of the commons. *Science* 162 (3859), 1243–1248.
- Heckathorn, D.D., 1996. The dynamics and dilemmas of collective action. *American Sociological Review*, 250–277.
- Jacquet, J., Hauert, C., Traulsen, A., Milinski, M., 2011. Shame and honour drive cooperation. *Biology Letters* 7 (6), 899–901.
- Keizer, K., Lindenberg, S., Steg, L., 2008. The spreading of disorder. *Science* 322 (5908), 1681–1685.
- Konow, J., Earley, J., 2008. The hedonistic paradox: is homo economicus happier? *Journal of Public Economics* 92, 1–33.
- Langfred, C.W., 2004. Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal* 47 (3), 385–399.
- Ledyard, J., 1995. Public goods: a survey of experimental research. In: Kagel, J.H., Roth, A.E. (Eds.), *The Handbook of Experimental Economics*. Princeton University Press, Princeton, NJ, pp. 111–194.

- Lindenberg, S., 1997. Grounding groups in theory: functional, cognitive, and structural interdependencies. *Advances in Group Processes* 14, 281–331.
- Lindenberg, S., 2003. Governance seen from a framing point of view: The employment relationship and relational signaling. In: Nootboom, B., Six, F.E. (Eds.), *The Trust Process in Organizations, Empirical Studies of the Determinants and the Process of Trust Development*. Elgar, Cheltenham and Northampton, pp. 37–57.
- Mauss, M., 1954[1923]. *The Gift: Forms and Functions of Exchange in Archaic Societies* (No. 378). WW Norton & Company.
- Nowak, M.A., 2006. Five rules for the evolution of cooperation. *Science* 314 (5805), 1560–1563.
- Olson, M., 1965. *The Logic of Collective Action*. Harvard University Press, Cambridge, MA.
- Ostrom, E., Burger, J., Field, C.B., Norgaard, R.B., Policansky, D., 1999. Revisiting the commons: local lessons, global challenges. *Science* 284 (5412), 278–282.
- Perry, J.L., Hondeghem, A., Wise, L.R., 2010. Revisiting the motivational bases of public service: twenty years of research and an agenda for the future. *Public Administration Review* 70, 681–690.
- Piliavin, J.A., Charng, H.W., 1990. Altruism: a review of recent theory and research. *Annual Review of Sociology*, 27–65.
- Podsakoff, P.M., Ahearne, M., MacKenzie, S.B., 1997. Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology* 82 (2), 262.
- Rudd, M., Aaker, J., Norton, M.I., 2014. Getting the most out of giving: concretely framing a prosocial goal maximizes happiness. *Journal of Experimental Social Psychology* 54, 11–24. <http://dx.doi.org/10.1016/j.jesp.2014.04.002>.
- Smith, A., 2002/1759. In: Hanley, R. (Ed.), *The Theory of Moral Sentiments*. Penguin, New York.
- Snijders, T.A.B., 2013. Network dynamics. In: Wittek, R., Snijders, T.A.B., Nee, Victor (Eds.), *The Handbook of Rational Choice Social Research*. Stanford University Press, Palo Alto, pp. 252–279.
- Sommerfeld, R.D., Krambeck, H.J., Semmann, D., Milinski, M., 2007. Gossip as an alternative for direct observation in games of indirect reciprocity. *Proceedings of the National Academy of Sciences* 104 (44), 17435–17440.
- Thaler, R.H., Sunstein, C.R., 2008. *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale UP, New Haven.
- Tocqueville de, Alexis, 2000/1835. In: Mansfield, H., Winthrop, trans. D. (Eds.), *Democracy in America*. University of Chicago Press, Chicago.
- Wittek, R.P.M., 2003. Norm violations and informal control in organizations: a relational signaling perspective. In: Six, F., Nootboom, B. (Eds.), *The Trust Process in Organizations: Empirical Studies of the Determinants and the Process of Trust Development*. Elgar, pp. 168–195.
- Zetka Jr., J.R., 1992. Work organization and wildcat strikes in the US automobile industry, 1946 to 1963. *American Sociological Review*, 214–226.