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# Collaborative Social Innovation in the Hybrid Domain

## Organization and Rationality

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**Abstract.** What are the institutional attributes that support the use of ICTs for social innovation? Based on the concept of the 'hybrid domain', we seek to better understand how various stakeholders with different priorities collaborate to combine economic and social objectives, and reconceptualize multi-stakeholder collaborative governance in the Global South. Using insights from behavioral economics and social psychology, we focus on two institutional aspects of social innovation - organizational arrangements and rationality. On the one hand, it is well recognized that social innovation stakeholders include not just states and commercial enterprises, but also NGOs, social enterprises, and for-profit/non-profit hybrid organizations. On the other hand, the rationality that brings together these stakeholders is not well articulated. While scholarship has emphasized utilitarian rationality, we highlight the importance of pro-social behavior in collaboration. We argue that scholarship in the past century has focused on utilitarian rationality while neglecting the role of prosocial behavior in collaboration. Further research on prosocial behavior and its incorporation in organizational theory would contribute to understanding the dynamics of collaboration for social innovation.

**Keywords** Social innovation, Collaborative Governance, Pro-social behavior, Global South

## 1 Introduction

How do social innovation stakeholders work together to develop norms and procedures, and what rationality do they adopt to overcome different priorities? In this paper, we explore the emerging organizational characteristics and rationality observed in case studies of social innovation stakeholders in India. We will unpack the concept of social innovation and the significance of ICTs, followed by the debate over governance, and in particular, the concept of the hybrid domain [1], which serves as an arena of collaboration among social innovation stakeholders. Based on our field research in India, we discuss three demonstrative cases in the areas of health, renewable energy and banking,

and explore organizational arrangements of collaborations, and theorize the changing norms and emerging rationality of the hybrid domain. With the growing prominence of social innovation, and recent attention turning to systems and policies oriented toward more socially inclusive and pro-poor designs [2-4], the timing is ripe to develop a synthetic approach to institutional governance that involves the state, markets and civil society, and goes beyond the conventional state-market divide.

## **2 The Rise of the Hybrid Domain**

Few theoretical frameworks explicitly incorporate multi-sectoral collaborations as an organizational dimension of innovation, whether technological, economic, or social. On the one hand, literature on governance seldom engages with innovation (see, for example, [5-7]) On the other hand, information systems theory is primarily concerned with intra-organizational transformations along with information system introduction (see, for example, [8, 9]).

The hybrid domain is conceptualized as a newly emerging domain that overlaps public and private interests [1]. Although the modern state has largely been the guardian of the public domain, and markets serve as the purveyors of the private domain, the distinction between the public and private domains does not correspond perfectly with the distinction between the public and private sectors (states-markets). The hybrid domain arises out of the blurring of the boundaries between public and private interests, and the blending of social and economic missions observed in various organizational forms today. The public interest may be represented by non-governmental entities (e.g., NGOs) or even by market actors (e.g., renewable energy providers). Widespread evidence suggests that, an increasingly important role of non-governmental, non-profit organizations as representatives of civil society, combined with technological innovation, particularly in ICTs, is having a profound effect on the lives of people around the world [1, 10-12]. The blurring and blending is intertwined and proceeds alongside the growing transnationalization of various interests and stakeholders. The hybrid domain sits on the boundary of, and overlaps with, the public and private domains. The hybrid domain demonstrates the ‘swelling of the middle’ and critiques the dominant analytical framework in understanding economic governance – one of state versus markets.

We observe a gradual transition from bilateral negotiations between the state and the markets to hybrid missions and heterarchical complexity. In some cases, this can be observed in subtle shifts in objectives or in articulations of multiple objectives in existing institutions. In other cases, this can be observed in cross-sector collaborations between existing institutions, or the rise of new hybrid institutions that straddle the public and private domains. The increasing popularity of various instruments such as corporate social responsibility (CSR) initiatives, corporate foundations, cross-sectoral col-

laborations involving corporations and NGOs, and the growth of entities such as strategic and leveraged-NGOs and social enterprises, point to the growth of the hybrid domain.<sup>1</sup>

The reasons for the rise of the hybrid domain are many and complex. In the Global South, the rise of the hybrid domain is an outcome of both state and market failures that result in underserved populations. In the Global North, it emerges from a quest for economic sustainability. In both cases, the failure or retreat of the state, and growing inequality, has placed the state under scrutiny, whereas corporate scandals have rendered the private sector increasingly suspect. These trends have all contributed to the shift in societal legitimacy and the division of labor in balancing economic and social objectives.

### 3 Social Innovation and ICTs

The hybrid domain is a necessary organizational framework to produce social innovation. The use of the term “social innovation” grew more than 67 times between the years 2000 and 2014 – from 24 to 1,614 - in the legal and journalistic database compiled by LexisNexus. Despite its appeal and potential, a precise definition of social innovation remains elusive, and its current usage varies widely in the literature. Simply put, social innovation refers to innovation for social change [13], designed to satisfy unmet social needs [14]. Moulaert, et al. [15] define social innovation as “the creation of new products, services, organizational structures or activities that are “better” or “more effective” than traditional public sector, philanthropic or market-reliant approaches in responding to social exclusion” (p. 1). As social innovation is both an outcome and a process of social change, and requires institutional change, formally and/or informally. A key feature of hybrid domain is cross-domain multi-stakeholder involvement that is distinct from earlier conceptualizations of multi-stakeholder collaborations.

Social innovation emerged out of globalization aided by ICT revolution. Contemporary globalization represents an “epochal transformation” [16] driven by ICTs to produce an “informational, global and networked”<sup>2</sup> economy capable of applying “its progress in technology, knowledge, and management to technology, knowledge, and management themselves. Such a virtuous circle should lead to greater productivity efficiency, given the right conditions of equally dramatic organisational and institutional changes” [17]. However, the impacts of ICTs have been social inequalities and uneven geographies that very selectively connects “localities throughout the planet, according

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<sup>1</sup>In the case of India, CSR was projected at USD2.5 billion in 2015 as the Companies Act of 2013 began requiring corporations to spend at least 2% of their net profits on CSR and articulate a CSR policy.

<sup>2</sup> It is informational as the productivity and competitiveness of its units is dependent upon their capacity to “generate, process and apply efficient knowledge-based information.” It is global as “its core activities of production, consumption and circulation are organized and generated on a global scale either directly or through a network of linkages between economic agents.” It is networked as “its productivity is generated through and competition is played out in a global network of interaction between business networks.”

to criteria of valuation and devaluation enforced by social interests that are dominant in these networks”[18]. Social innovation also emerged out of ICT revolution that allowed inter-organizational, ‘open’ innovation[19]. Open innovation, however, has not been explicitly considered in understanding social innovation, perhaps due to the original geographic bias that favored strong intellectual protection typically available in the Global North [20].

Contemporary examples of social innovation include, but are not limited to, micro-credit financing, micro-franchising, clean/alternative sources of energy, and new modes of healthcare delivery using the Internet. Social innovation emerges from the juxtaposition of social mission with market logic, along with changing state–market relations, institutional design, and technological innovation. Among are many technologies that catalyze social innovation by enabling access to otherwise infrastructure-deficient, difficult to service areas and populations, ranging from the rural poor, the disabled, and the elderly, it is argued that ICTs have had the most significant impact on social change [6, 16, 17]. Although technological advances have promised to tackle poverty, illiteracy and poor physical infrastructure, the impacts on the poor have thus far been limited<sup>3</sup> because of significant challenges, including weak institutional support, the need for value-addition and finance, and ambiguous intellectual property rights [21].

#### **4 Collaborations in the Hybrid Domain: Prosocial Rationality**

How do collaborations take place across the hybrid domain, which involves competing objectives and institutional heterogeneity? Developing shared norms among heterogeneous organizations across domains is a formidable challenge, both conceptually and pragmatically. Few studies develop a conceptual framework involving heterogeneous stakeholder collaborations. Swanson and Ramiller [22] conceptualized ‘organizing vision’ that emerges along with an adoption of information systems, but their reference to ‘inter-organizational community’ appears to be limited to stakeholders in the private sector, and to instances of cross-organizational implementation of IT networks.

Rationality has been a crucial conceptual vehicle to understand human behavior in the social sciences, and various types of rationality have been examined [23-27]. Yet, as Genov [28] observes, collective rationality that governs social innovation is seldom elaborated. In particular, how stakeholders develop collective rationality based on the need to collaborate for mutual gains is poorly understood. Instrumental rationality, for example, cannot explain why organizations engage in innovation [29]. Similarly, motivations and behaviors involving philanthropy or charity have been understood quite separately from rationality that explains innovative behavior.

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<sup>3</sup>Social innovation has long been attempted under various guises -- for example -- the “appropriate” technologies movement of decades past. More recently, grassroots innovation, such as *jugaad* (Hindi for local improvisation) in India’s informal sector, has come to be celebrated as a reflection of ingenuity in meeting needs in conditions of scarcity. However, all of them have suffered from the high transaction costs for scouting and documentation,, limited transferability and a perception that the technologies deployed were inferior.

In distinguishing between substantive and procedural rationality [24], Simon characterized substantive rationality, typically adopted by economists, as being “viewed in terms of the choices it produces”, whereas procedural rationality adopted by psychologists is viewed “in terms of the processes it employs” [25]. Simon critiques substantive rationality that constantly seek optimization as, in his view, it ultimately becomes unresponsive to decision contexts. This tendency has led to what some have called the ‘norms of self-interest’ [30], which justifies self-interested behavior in many Western societies. For example, research on charity suggests that people are more likely to donate a small amount if they receive a small token gift in return. This allows people to rationalize charity not simply as a self-less act but also as one that does not contradict self-interest [30]. Thus, a concept that was initially intended to be purely descriptive gradually adopts a prescriptive tone in shaping both individual behavior and social norms. Despite its deficiencies, substantive rationality with optimization of self-interest is still implicitly and explicitly assumed as the dominant paradigm of rationality.

The expectations of self-interested behavior as the norm is also reflected in scholarship; research that focuses on behaviors that cannot be described by utilitarian rationality are often characterized as irrational or emotional [31-35]. In such context, fundamentally prosocial behaviors, such as routine acts of kindness, altruism, and co-operation, are either unexplainable or interpreted as being motivated by self-interest. Methodologically, the dominance of game theory in analyzing socio-economic behavior functions to reinforce the norms of self-interest, as the assumptions inevitably involve reciprocity or some kind of quid-pro-quo as the motivational basis of prosocial behavior. For example, Axelrod [36] developed ‘cooperation theory’ based on substantive rationality, as reflected in his identifications of four properties of cooperation “in a world of egoists without central authority.” (p.20). Alternatively, Jensen [37] used the term ‘enlightened value maximization’ to explain behavior that involves not simply economic value maximization, but also social value maximization. The methodological constraint therefore precludes a possibility that social behavior may not be calculable.

Interest in prosocial behavior have risen in part along with the expansion of sympathy in contemporary Western society [see, for example, 38]. Drawing on scholarship in psychology, Lindenberg [39] defines prosocial behavior as those that are “intentionally beneficial to others (not necessarily without self-interest) and involving some sacrifice” (p.24). Instead of focusing on “research toward explaining self-interested sources of cooperation [40],” research in psychology has “moved on to the question of when and how the same individual is governed by very different sets of motives, and under what conditions these different sets of motives lead to prosocial behavior.” (p.24). In fact, a form of hybrid rationality – a combination of strategy and charity -- is perhaps far more accurately reflect reality than conventional substantive rationality.

Recent research in biology shows that prosocial behaviors are observed among chimpanzees without obvious quid-pro-quo [41-44], suggesting that such behaviors are neither learnt as previously assumed, nor unique to humans. Instead prosocial behavior is widespread and biologically programmed in other species, contradicting the Darwinian view of survival-of-the-fittest as the key to evolution. Thus, exploring how we conceptualize prosocial behaviors would help better understand collaborative impetus in the

hybrid domain; why various stakeholders today seek to develop common agenda, how they develop norms that make cross-domain collaborations possible.

DiMaggio [45] argues that rationality needs to be ‘constructed’ to allow collaborations to take place. Whereas rationality of the commons has been conceptualized based on individual rationality [see, for example, 46], the concept of collective rationality, as it is used today, typically refers to political decision making [see, for example, 34, 47]. The ‘communities of practice’ would by default require a community, and while the concept parallels scholarship in information systems theory, cross-domain collaborations goes beyond professional communities in the private sector. Perhaps a better avenue is to adopt Searle’s term, ‘collective intentionality’ [48], which can be developed through collaborative processes among organizations such as MNEs, NGOs, social entrepreneurs and the state. Collective intentionality can be framed as a starting point of collaboration for social innovation wherein divergent organizational rationales and the division of labor are gradually altered and ultimately produce discourse convergence fusing social and economic missions. Discourse convergence as an outcome of collaboration can, in turn, produce a new prosocial collective intentionality for yet another kind of social innovation.

## 5 Case Studies of Cross-domain Discourse Convergence

In this section, we discuss three case studies of discourse convergence as a process of collaborative efforts in inducing and implementing social innovation. We conducted 115 semi-structured interviews of various stakeholders in major Indian cities (Bangalore, Chennai, Delhi, Hyderabad, Mumbai) in 2011-2014.<sup>4</sup> Stakeholders ranged from business units and CSR sections of multinational enterprises (MNEs), social enterprises, private foundations, and global and grassroots NGOs. The following three examples serve as paradigmatic cases which, in our view, best represented discourse convergence through cross-domain collaborations. Since our research was qualitative that aimed at uncovering new insights, our sample size does not allow us to demonstrate representativeness, and claim generalizability based on our findings. However, we believe these cases generate useful insights from which to generate hypothesis.

All three cases involve using ICTs. Also, they demonstrate how stakeholders, with varying norms and objectives, ultimately develop a common agenda, and in the process, alter their organizational discourse to develop shared, prosocial objectives. While developing shared objectives, discourse convergence occurs among stakeholders. We chose one case study each from the health, renewable energy, and retail banking sectors. These collaborations were initiated and led by different stakeholders, one was led by an MNE, another a social entrepreneur, and the third an NGO-turned social enterprise.

Traditionally, the interests of MNEs, NGOs and social entrepreneurship are understood to conflict with one another [49-51]. For instance, as MNEs seek to maximize profitability through volume sales, NGOs seek to achieve their social mission by

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providing health services, and SEs seek to develop niche products with social impacts, while the state attempts to give access to universal basic healthcare for the poor. Each stakeholder encounters constraints, however, arising out of one-dimensional intervention to complex and multidimensional ‘wicked problems’ [52, 53]. The MNE faces low profitability (and therefore exits from the market segment all together), the NGO is mired by lack of funds, the SE lacks scale and therefore makes little social impact, and the state is unable to reach political agreement to divert resources to single-handedly develop healthcare infrastructure. In the case we observed, these stakeholders entered into a collaborative arrangement in which each of their priorities was modified in the process of discourse convergence.

In Table 1, we summarized the similarities and differences of the case studies through the process of discourse convergence; the initial organizational priorities for the stakeholders involved and their constraints; organizational learning that leads to collaboration seeking; emergence of prosocial rationality; and the development of inter-organizational solutions.

### 5.1 Case #1: Medical devices

In the first case, a US MNE in medical devices partnered with an NGO and a social enterprise to develop an affordable incubator for use in an infrastructural deficient (i.e., inconsistent power supply) and knowledge deficient (i.e., lack of licensed medical professionals) environment. Collaborations emerged with a single objective of lowering infant mortality rates. The MNE described the new discourse as follows.

*We need to have partnerships, because the equipment will go there and it won't get used ... as I have seen, not just India, in Vietnam, in Ghana. You need monitor use, train people, tweak products... The company needs to have vision. Ours is to make a significant impact to infant mortality rate globally, the 4<sup>th</sup> goal of the Millennium Development Goals (MDG). Whatever we do feed into that vision. You can't just develop products sell them and see what happens. Even if you go down the road of defeating and making a device affordable, at some point, it's important to loop back to the vision. Is the vision affordability or is the vision IMR reduction? Business is a side effect of the vision.<sup>5</sup>*

What is notable is the shift of discourse within the for-profit sector from an economic (“number of units sold”) to a of social (“number of babies saved”) objective. Social motivations function as powerful incentives in the contemporary corporate environment, because economic objectives cannot be met in the long run if social objectives remain unmet. In doing so, the discourse within the corporation demonstrates an explicit engagement with social good which, in turn, encourages cross-domain collaborations.

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<sup>5</sup>Interview by authors, June 22, 2012.



**Table 1.** Examples of Discourse Convergence: Health, Energy, Banking

	Common features	MNE	NGO	Social Enterprise	State
Priorities	Divergent	Number of devices sold	Provide access to services for the poor	Sustainable revenue generation for social mission	Providing access to services for the poor
Constraints	One dimensional knowledge; fragmented solution-seeking	Profitability; Weak agility; absence of trust; inadequate training (operators)	Unsustainable, under-resourced (personnel, technology)	Limited scale and constrained manufacturing and distribution networks	Under-resourced; political conflicts; limited state capacity; principal-agent problem
Learning	Complementarity seeking	Devices will not sell unless they are effective and actually deployed	Absence of solutions	Impacts are limited without scaling	State cannot solve the problem alone
Prosocial Rationality	Convergence of objectives	to reduce infant mortality rates; to develop an energy solution; to improve access to banking for the poor			
Inter-organizational solutions	Collaborations	Partner with SE for innovation, eco-system development; with NGO for contextual knowledge and training	Partner with MNE for device manufacturing and technological platforms	Partner with MNE for brand recognition and global distribution networks	Modify regulations, state contract bidding process, provide subsidy to encourage adoption

## 5.2 Case #2: Renewal Energy

Similar processes were observed for collaborations in renewable energy and retail banking. For the former, social entrepreneurs led the development of business eco-systems involving micro-franchising, transnational financing and private foundations, and simultaneously realigning stakeholder discourse over providing access to solar lanterns. Generally, the discourse shifts from conflicting priorities to solutions seeking collaborations. Through this process, a new set of shared norms emerge and stakeholders, particularly in the private sector, begin to seek social value maximization instead of exclusively focusing on economic value maximization. Conversely, social mission alone

does not guarantee sustainability. In particular, one-off charitable gifts (e.g., a MNE giving away solar lanterns through CSR initiative in collaboration with a NGO) not only fail to generate sustained use of renewable energy, but also could wipe out the local entrepreneurial eco-system. According to the social entrepreneur:

*One CSR division of a company came [to us] and said, “can you do 1,000 houses for us ... by March 31st, I have to show this [to my superiors], and the money has to [be spent] ... And I might not remain in this position.” They would have been happy doing 1,000 houses for free, [but] that would have destroyed the renewable energy market there ... [They have] not thought about the sustainability.<sup>6</sup>*

By developing a revenue-driven business model that supports micro-franchises to offer hourly leases of solar lanterns, it becomes possible for street vendors and farmers to increase operating hours and generate higher revenues. This not only supports local entrepreneurs, but it also provides renewable energy solutions which, in some instances, reduces energy costs for the poor and those in the informal sector. . This model requires coordination among social entrepreneurs and manufacturers of solar lanterns (e.g., MNEs). Operating costs of social entrepreneurs may also be subsidized by foundation and state grants.

### **5.3 Case #3: Rural banking**

A NGO-turned social entrepreneur led an effort to bring affordable and secure remittance transfer service to migrant construction workers. This required a combination of regulatory changes (i.e., the state), software platform development (i.e., MNEs), the participation of a bank and informal retailers. “*We benefitted indirectly from an MNE – who alerted us about an existing technological platform developed for a foundation and supported by another MNE. We developed a whole new transaction platform on it along with a telecommunication layer... Also, an endorsement by the MNE was beyond financial... a critical intervention for credibility. So, external help did matter.*”<sup>7</sup> As was the case with the medical device collaboration, discourse convergence took place when the social entrepreneur’s complex mission was understood to be unachievable without partnering across sectors. The social entrepreneur’s role was to involve the MNEs, financial sector and the informal retailers, and develop a solution to a complex problem that can only be devised through collaborations. In the process, the MNE acquired context specific knowledge on the livelihood challenges faced by the poor, such as the difficulties faced by migrant construction workers without bank accounts to access affordable and secure remittance transfer services.

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<sup>6</sup> Interview by authors, July 12, 2013.

<sup>7</sup> Interview by authors, July 23, 2012.

## 6 Summary Reflections

The new de-specialization trend is observed in corporations blending social and economic missions, through various forms of collaborations. These trends toward de-specialization and shifting boundaries of organizations culminate into hybridized missions that blend public and private interests simultaneously, and achieve societal goals by taking the best of both worlds, avoiding both the social neglect of the private sector and the inefficiency of the public sector.

Historically we have moved from a low (basic) to high (more sophisticated) division of labor and accordingly specialization of tasks and functions in the economy. Today, –efforts are underway to avoid the disadvantages from over-specialization which outweigh advantages of specialization. Firms are getting rid of the ‘silos’ and developing R&D that brings together multidisciplinary teams of scholars and disciplines.. The specialization has also resulted in a separation of social and economic missions within corporations, with corporate charitable foundations to fulfill social missions, and economic missions fulfilled by maximizing profit accumulation.

There remains a question of accountability in cross-domain collaborations. Since the main objective of this paper is to show how collaboration in the hybrid domain can lead to a convergence of economic and social objectives of stakeholders with different priorities, and thus point to how solutions can be found for wicked problems, it does not explicitly address the issue of accountability. However, we hypothesize that accountability can be fortified through collaboration. For instance, the movement of people from the corporate sector to NGOs makes it easier to share and develop norms for collaboration. The verification of this hypothesis offers a significant future direction for research on the role of collaboration in social innovation.

## 7 References

1. Aoyama, Y., Parthasarathy, B.: *The Rise of the Hybrid Domain: Collaborative Governance for Social Innovation*. Edward Elgar, New York and London (2016)
2. Altenburg, T., Lundvall, B.-A.: Building inclusive innovation systems in developing countries: challenges for IS research. In: Lundvall, B.-A., Joseph, K.J., Chaminade, C., Vang, J. (eds.) *Handbook of innovation systems and developing countries: Building domestic capabilities in a global setting*, pp. 33-56. Edward Elgar (2009)
3. Foster, C., Heeks, R.: Conceptualising inclusive innovation: Modifying systems of innovation frameworks to understand diffusion of new technology to low-income consumers. *Europ. J. Devel. Res.* 25, 333-355 (2013)
4. Sonne, L.: Innovative initiatives supporting inclusive innovation in India: Social business incubation and micro venture capital. *Technol. Forecast. Soc. Chang.* 79, 638-647 (2012)
5. Ostrom, E.: Beyond markets and states: polycentric governance of complex economic systems. *The American Economic Review* 641-672 (2010)
6. Jessop, B.: The rise of governance and the risks of failure: the case of economic development. *Int. Soc. Sci. J.* 50, 29-45 (1998)
7. Mittelman, J.H.: *Global Bricolage: Emerging Market Powers and Polycentric Governance*. *Third World Quarterly* 34, 23-37 (2013)

8. Swanson, E.B.: Information Systems Innovation Among Organizations. *Manage. Sci.* 40, 1069-1092 (1994)
9. Swanson, E.B., Ramiller, N.C.: Innovating Mindfully with Information Technology. *MIS Quarterly* 28, 553-583 (2004)
10. Pfeiffer, J.: International NGOs and primary health care in Mozambique: the need for a new model of collaboration. *Social science & medicine* 56, 725-738 (2003)
11. Boddewyn, J., Doh, J.: Global strategy and the collaboration of MNEs NGOs and the government for the provisioning of collective goods in emerging markets. *Global Strategy Journal* 1, 345-361 (2011)
12. den Hond, F., de Bakker, F.G.A., Doh, J.: What Prompts Companies to Collaboration With NGOs? Recent Evidence From the Netherlands. *Business & Society* 54, 187-228 (2015)
13. Michelini, L.: *Social Innovation and New Business Models: Creating Shared value in Low-Income Markets*. Springer (2012)
14. Van Dyck, B., Van den Broeck, P.: Social Innovation: a territorial process. In: Moulaert, F., MacCallum, D., Mehmood, A., Hamdouch, A. (eds.) *The International Handbook of Social Innovation: Collective Action, Social learning and Transdisciplinary Research*. Edward Elgar, Cheltenham, UK (2013)
15. Moulaert, F., MacCallum, D., Hillier, J.: Social Innovation: Intuition, percept, concept, theory and practice. In: Moulaert, F., MacCallum, D., Mehmood, A., Hamdouch, A. (eds.) *The International Handbook on Social Innovation*, pp. 13-24. Edward Elgar, Cheltenham, UK (2013)
16. Sassen, S.: *Territory, authority, rights: From medieval to global assemblages*. Cambridge Univ Press, Cambridge (2006)
17. Castells, M.: *The Rise of the Network Society. The Information Age: Economy, Society and Culture, Volume I*. Blackwell, Oxford (2000)
18. Castells, M.: Preface. In: Evans, P.B. (ed.) *Livable Cities? Urban Struggles for Livelihood and Sustainability*, pp. is-xi. University of California Press (2002)
19. Chesbrough, H.: *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business School Press (2003)
20. Quan, X., Chesbrough, H.: Hierarchical segmentation of R&D process and intellectual property protection: Evidence from multinational R&D laboratories in China. *Engineering Management, IEEE Transactions on* 57, 9-21 (2010)
21. The World Bank: *Unleashing India's Innovation: Toward sustainable and inclusive growth*. The World Bank, Washington, D.C. (2007)
22. Swanson, E.B., Ramiller, N.C.: The Organizing Vision in Information Systems Innovation. *Organization Science* 8, 458-474 (1997)
23. March, J.G.: Bounded Rationality, Ambiguity, and the Engineering of Choice. *The Bell Journal of Economics* 9, 587-608 (1978)
24. Simon, H.A.: From substantive to procedural rationality. In: Kastelein, T.J., Kuipers, S.K., Nijenhuis, W.A., Wagenaar, G.R. (eds.) *25 Years of Economic Theory: Retrospect and prospect*, pp. 65-86. Springer US, Boston, MA (1976)
25. Simon, H.A.: Rationality in Psychology and Economics. *The Journal of Business* 59, S209-S224 (1986)
26. Hirschman, A.O.: Rival Interpretations of Market Society: Civilizing, Destructive, or Feeble? *J. Econ. Lit.* 20, 1463-1484 (1982)
27. Hirschman, A.O.: *Shifting involvements: private interest and public action*. Princeton University Press (1982)
28. Genov, N.: Towards a multidimensional concept of rationality: the sociological perspective. *Sociological Theory* 9, 206-211 (1991)
29. Lockyer, J., McCabe, D.: Leading through fear: Emotion, rationality and innovation in a UK manufacturing company. *European Journal of International Management* 5, 48-61 (2010)

30. Miller, D.T.: The norm of self-interest. *American Psychologist* 54, 1053 (1999)
31. Avgerou, C., McGrath, K.: Power, Rationality, and the Art of Living through Socio-Technical Change. *MIS Quarterly* 31, 295-315 (2007)
32. DiMaggio, P., Powell, W.W.: The iron cage revisited: Collective rationality and institutional isomorphism in organizational fields. *American Sociological Review* 48, 147-160 (1983)
33. Li, Y., Ashkanasy, N.M., Ahlstrom, D.: The rationality of emotions: A hybrid process model of decision-making under uncertainty. *Asia Pacific Journal of Management* 31, 293-308 (2014)
34. Moshman, D., Geil, M.: Collaborative Reasoning: Evidence for Collective Rationality. *Thinking & Reasoning* 4, 231-248 (1998)
35. Ostrom, E.: A Behavioral Approach to the Rational Choice Theory of Collective Action: Presidential Address, American Political Science Association, 1997. *Amer. Polit. Sci. Rev.* 92, 1-22 (1998)
36. Axelrod, R.M.: *The evolution of cooperation*. Basic books (2006)
37. Jensen, M.C.: Value Maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics Quarterly* 12, 235-256 (2002)
38. Pinker, S.: *The better angels of our nature: The decline of violence in history and its causes*. Penguin UK (2011)
39. Lindenberg, S.: Prosocial behavior, solidarity, and framing processes. *Solidarity and Prosocial Behavior*, pp. 23-44. Springer (2006)
40. Yamagishi, T.: Social dilemmas. *Sociological perspectives on social psychology* 311-335 (1995)
41. Horner, V., Carter, J.D., Suchak, M., de Waal, F.B.: Spontaneous prosocial choice by chimpanzees. *Proceedings of the National Academy of Sciences* 108, 13847-13851 (2011)
42. Warneken, F., Tomasello, M.: Altruistic helping in human infants and young chimpanzees. *science* 311, 1301-1303 (2006)
43. Silk, J.B., House, B.R.: Evolutionary foundations of human prosocial sentiments. *Proceedings of the National Academy of Sciences* 108, 10910-10917 (2011)
44. de Waal, F.B., Suchak, M.: Prosocial primates: selfish and unselfish motivations. *Philosophical Transactions of the Royal Society of London B: Biological Sciences* 365, 2711-2722 (2010)
45. DiMaggio, P.: The New Institutionalisms : Avenues of Collaboration. *Journal of Institutional and Theoretical Economics (JITE) / Zeitschrift für die gesamte Staatswissenschaft* 154, 696-705 (1998)
46. Ostrom, V., Ostrom, E.: Public goods and public choices. In: *Polycentricity and local public economies. Readings from the workshop in political theory and policy analysis*, pp. 75-105. Ed. Michael McGinnis, Ann Arbor.-University of Michigan Press, (Year)
47. Blair, D.H., Pollak, R.A.: Collective rationality and dictatorship: The scope of the arrow theorem. *J. Econ. Theory* 21, 186-194 (1979)
48. Searle, J.R.: *The construction of social reality*. Penguin Books, London (1995)
49. Burchell, J., Cook, J.: Sleeping with the enemy? Strategic transformations in business-NGO relationships through stakeholder dialogue. *J Bus Ethics* 113, 505-518 (2013)
50. Arts, B.: 'Green alliances' of business and NGOs. New styles of self-regulation or 'dead-end roads'? *Corporate Social Responsibility and Environmental Management* 9, 26-36 (2002)
51. Yaziji, M., Doh, J.: *NGOs and corporations: Conflict and collaboration*. Cambridge University Press (2009)
52. Churchman, W.: Wicked problems. *Manage. Sci.* 4, 141-142 (1967)
53. Buchanan, R.: Wicked Problems in Design Thinking. *Design Issues* 8, 5-21 (1992)