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***Inter-Organizational Collaboration: Units and Levels of
Analysis with Multi-Theory Lenses***

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Abstract: Efficient knowledge and information transfer within as well as across organizational boundaries are of a proven importance for survival and growth of firms. At the same time, however, on the one hand, knowledge available within organizations is not always used to its full capacity, at times at the considerable detriment of organizations involved. Furthermore, on the other hand, despite the recognized importance of an efficient interorganizational knowledge transfer, many collaborations have not delivered on their promises. Merges and acquisitions deals, for instance, are prone to fail. The goal of this article is to propose and illustrate a conceptual argument why knowledge and information transfer that crosses departmental and firm boundaries, and in doing so often also domain or disciplinary boundaries, is challenging.

Keywords: collaboration, firm collaboration, knowledge transfer

JEL Classification Codes: D21, L22, M10

The transfer of knowledge within and between firms has come to be seen as increasingly important for firm performance. If one wants to understand a complex phenomenon of intra- and, what is more, inter-organizational knowledge transfer, one needs to understand first, the different levels of the phenomenon itself (individual, team, project, organizational, interorganizational levels) (cf. Bogers et al. 2017); then, different units of analysis (individuals, groups, artifacts, social interactions); diverse needs to be acknowledged; and moreover, various theoretical lenses that tackle knowledge transfer from different angles. To clarify how these different conceptual aspects intervene, we analyze the literature gluing different analytical levels together—please note figure 1 for reference.

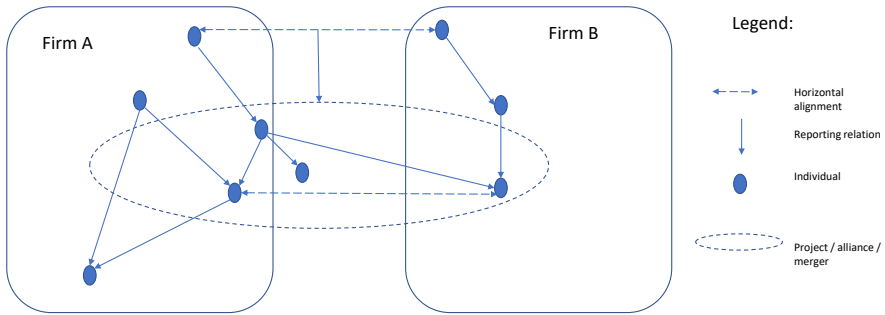
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Figure 1. Conceptual Intricacies of Intra- and Inter-Organizational Collaboration



Various Lenses, Inadequate Views

To start with, principal agent theory is developed to understand how rational individuals might interact inside of an organization.¹ In terms of figure 1, only vertical reporting relations are assumed in which the principal's challenge is to make the agent act not in line with their own interests but in line with those of the principal. In addition to the flat assumption of individual preferences and decision-making strategy, this theory in its most basic form does not account for horizontal relations between individuals. In light of this principal agent theory, with reference to figure 1, an agent might have different principals. These principals might be from different departments or even from different organizations, as is wont in modern economic circumstances where many different kinds of collaboration are prevalent. In temporary multi-organization projects, alliances, joint ventures, merged organizations, especially when knowledge needs to transfer, an agent might have principals from different organizations. Even when an agent has principals from different departments in the same organizations, as in an organization that has adopted a matrix structure, the agent deals with multiple principals. Principal principal agent theory has recently started to acknowledge as much (Grosman, Aguilera, and Wright 2019), but is not offering particular insights as to how to understand the dynamics involved. The principal principal agent dynamics are altered when multiple principals are from different organizations. When a single principal seeks to influence the behavior of multiple agents who are from different parts of a firm or even from different firms, their effectiveness is also impacted (perhaps referred to as a principal agent situation).

Social network analysis, which draws on graph theory and is quite heavily used in sociology, looks at knowledge transfer between individuals presented as nodes in a network (Casper 2013). Any social entity can be analyzed,² with potentially a number of different social networks to be recognized in each organization. Hierarchy in the organization, membership of organization (department), as well as a range of personal characteristics can be included in the (visualized) descriptive, or included in statistical analysis that would also include data for variables that make sense from a social network point of view. Patterns of

¹ Principal agent theory is used too, and perhaps foremost, to understand managers of an organization's relationship to owners of that organization. Here, for the sake of simplicity, we restrict ourselves to relations between individuals inside an organization and individuals of only two organizations collaborating to work towards a shared goal.

² Indeed, a network consisting of nodes—and relations (ties) between them—need not be individuals. Nodes can also be departments, organizations, regions, nations, and also computers or patent classes, for instance (Aalbers and Dolfsma 2015).

knowledge transfer, the focus here, are only impacted by the structure of the knowledge transfer network; individuals can only be expected to have a more favorable outcome from the process or impact on the process from their position in the network (Aalbers and Dolfsma 2015). While the singular focus on vertical or hierarchical relations is not there in social network analysis, and dynamics in collaboration between different organizations can be analyzed (cf. Dolfsma, Wang, and Van der Bij 2019), the *nature* of the relations between individuals is largely ignored.

Two principals coming from different organizations, or two project team members (agents) who are from different organizations, might well bring organization-specific expectations, routines, and views of the world. One might refer to this as an organization's culture. The latter potentially creates a testing ground for the principal agent-agent view, as rational consideration is understood as contextual rather than universal, as well as for the social network view of organizations, since interactions depend on (much) more than structure of the network and position in it. Organizational cultures (Dolfsma, Geurts, and Chong 2017) might link with a disciplinary predominance in either an organization or even a department within an organization.

Projects might also involve outsiders, say temporarily, in an interim capacity, bringing their own perspective. Outsiders, with a contract that might be more specific than a labor contract of employees tends to be (cf. Dolfsma 1998), might be more amenable for steering from a principal, however. Outsiders might also not have the commitment to the organization and its goals required for contributing creative content.

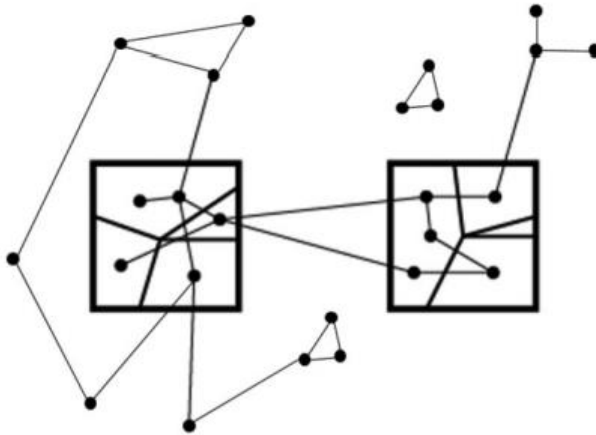
Creativity Crosses Boundaries

Where firms such as Bell Labs could develop the technology required to dominate their businesses, even when a number of businesses developed using the technologies that they also created but did not use,³ nowadays even the biggest firms, dominating their domineering industries (e.g., ASML–Advanced Semiconductor Materials Lithography) cannot do so without intense collaboration both within its boundaries across departments as well as across organization boundaries (cf. Bouty 2000; Chesbrough 2003; Ferrary 2003; Aalbers, Dolfsma, and Leenders 2016; Dolfsma and Van der Eijk 2017). Remember that collaboration can also take the form of acquiring a firm to bring it into a portfolio before it starts to become a competitor as is wont in busines-to-consumer contexts.

The kind of creativity that is required therefore necessarily involves crossing boundaries—see figure 2. Such boundary crossing collaboration exacerbates the conceptual challenges seeking to understand patterns of collaboration. The more parties are involved, the more complicated the organizational and governance issues (see Hofstede 1990; Geurts et al. 2022). Commitment and loyalty to the organization, or perhaps alternatively referred to as the positive effects of organizational culture, are less likely to stimulate such collaboration when organizational boundaries are crossed. The literature on organizational culture has not (extensively) studied how boundaries within the organization and in particular between organizations affect the influence of culture on people's behavior. What is needed is a more elaborate view of how relations between individuals form in general.

³ See Gertner (2012). Technologies developed here were sometimes unnoticed, and at times forcefully extracted from it for use by others (Watzinger et al. 2020).

Figure 2. Knowledge Transfer Crossing Unit and Firm Boundaries



Source: Leenders and Dolfsma (2016)

Social Exchange Theory—How Gifts Establish Relations

What is also known, however, outside of social network analysis, is the role of personality characteristics and (organizational) status characteristics. As for the latter, for instance, line-managers operate in a different manner when involved in knowledge transfer compared with employees without a manager role (Dolfsma and Van der Eijk 2021). This difference between individuals cannot fully be analyzed from a social network analysis point of view. What is required is a perspective that acknowledges that both the nature of the (evolving) relationship, as well as the qualities that the involved individuals have makes a difference. Qualities of individuals are, of course, ascribed to them by the environment they are imbued in.

Social exchange literature points out that gift exchange plays a vital role in constructing social relations (Boulding 1981; Cheal 1988; Gouldner 1960; Larsen and Watson 2001). Gifts may be used to initiate, maintain, or sever relationships with individuals or groups (Cheal 1988; Darr 2003; Gouldner 1960; Larsen and Watson 2001; Mauss [1954] 2000). Frequent gift or favor exchange leads to positive emotions and uncertainty reduction which, in turn, generates cohesion and commitment to exchange relations (Lawler, Yoon, and Thye 2000). Gifts may be exchanged for both instrumental and more purely altruistic reasons (Blau 1964; Ekeh 1974; Homans 1974; Mauss [1954] 2000). Even though self-interest and instrumental considerations may play a role, for gifts—rather than prices or bribes (cf. Rose-Ackerman 1998)—nature, value, and moment of the counter-gift are purposefully not specified. Community-specific rituals signal “expectation of the persistence and fulfilment of the [. . .] social order” (Barber 1983; cf. Gambetta 1988). Creation of trust is implicit as there is the expectation of a counter-gift in gift exchange between individuals (cf. Bourdieu 1992; Darr 2003). It is this expectation of reciprocity and perceived sense of equity over the longer term that makes the exchange mutually beneficial, and therefore its continuance is to be expected (Cook and Emerson 1984).

Enforcement is self-regulating, since, between equals, if one partner fails to reciprocate, the other actor is likely to discontinue the exchange (Nye 1979). Because gift exchange is unbalanced when viewed at any one particular point in time, a longitudinal perspective

more accurately reveals the nature of gift giving. A deferred return obligates one individual to another and creates “social debt.”⁴ Gift exchange is characterized by three principles (Mauss [1954] 2000). To be part of an (informal) community, people are obliged to (1) give, (2) receive, and (3) reciprocate (cf. Dore 1983; Gouldner 1960; Simmel 1996). These obligations are social, in that they are “enforced” by the community. In addition, they may have moral overtones. Acceptance of the gift is, to a certain extent, acceptance of the giver and the relationship between the individuals (Larsen and Watson 2001). A gift perceived as improper by the receiver may be rejected, may fail to initiate a relation, and may harm an existing relation and the trust inculcated there. Refusal of the initial gift marks the refusal to initiate the dynamic of exchange; thus to refuse a gift is to refuse a relationship and one’s role in that relation (Ferrary 2003; Mauss [1954] 2000).

Reciprocity is open to discretion as to the value and form of the counter-gift: the currency with which the obligation is repaid can be different from the form with which they were incurred. Making an equal-return “payment” in gift exchange, however, is tantamount to discontinuing the relationship. Gift exchange is diachronous since reciprocity is open to discretion with regard to time; a gift is not reciprocated by immediate compensation, but instead by a deferred form of compensation (Bourdieu 1977 and 1992; Ferrary 2003; Mauss [1954] 2000). Material value of gifts exchanged can be compensated for by obvious inculcation of immaterial value—such as time, effort, and creativity—in the counter-gift.

The instrumental reason for giving in the first place is to be able to establish a relation that will be beneficial in the long run, possibly by being able to tap into the other relations that the receiving party maintains (Ferrary 2003). The exact nature or moment of the counter-gift is thus not specified beforehand. In addition to being “silent,” gifts or favors are versatile in the sense that form and content can vary extensively, depending on the circumstances and broader context. Although the type of gifts and favors as well as the rituals involved, due to legal and/or normative constraints, can transform over time, the practice of informal personalized exchange has been demonstrated in many organizational settings (Allen 1977; Von Hippel 1987).

Concluding Comments

In modern organizations work connections between people often cross either internal or between-organizations boundaries. In modern organizations, work-connections often are more like informal relations than before. Mainstay economic and organization theory such as principal agent theory or social network analysis cannot readily explain the dynamics involved in such relations. In this short article we have presented social (gift) exchange theory as a lens that helps understand the relations in modern organizations.

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⁴ If the obligations could in fact be enforced and imposed on by third parties, we would be talking about market transactions.

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