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WORKING PAPER

Trust in whole networks in the public and nonprofit sector: The impact of public sector characteristics?

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March 2010

2010/649

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Abstract

This article argues that networks in the public and nonprofit sector have typical characteristics that might impede the functioning of whole networks and, in particular, the development of affect-based and cognition-based trust. Such characteristics are related to safeguarding public sector values, power imbalance due to the mandatory and vertical character of the network, and effectiveness of networks in the public and nonprofit sector. Network types (i.e. network-administrative organization, lead organization, and shared governance) are suggested as potential moderators in reducing dysfunctionalities in public and nonprofit networks. In a sample of 54 networks, the effects of the assumed network dysfunctionalities on the two types of trust in the different types of networks were studied using a multilevel approach. Findings indicated that especially flexibility in the networks was important. Several characteristics of public and nonprofit networks were less problematic than expected.

Keywords: networks, network types, public and nonprofit sector, trust

Introduction

Networks have been booming in the last decade and are often considered as a better alternative to traditional organizational forms, i.e., markets and hierarchies (Kenis & Provan, 2009; Lowndes & Skelcher, 1998; McGuire, 2006). Networks have also long been considered as positive per se, while literature in which the performance of networks is questioned is limited and more recent (Kenis & Provan, 2009). Agranoff and McGuire (2001), for instance, question the idea that networks might be more effective than markets or hierarchies in a

public management context. They claim that there are two perspectives; namely networks might not be superior but just fit better in the current context, or actual problems and issues in today's society really require the use of networks. However, they continue by showing that empirical research proving network success and superiority of networks versus markets or hierarchies does not yet exist. We aim at contributing to network theory by continuing on the more critical view of networks (such asO'Toole & Meier, 2004). By questioning whether particular conditions in the public and nonprofit sector influence the working of networks in this sector, we aim at learning whether these conditions might impede the development of sufficient levels of trust crucial to network success. The booming of networks in the public and nonprofit sector might be a blessing because of the possibilities that networks might have in improving the quality of decision-making and providing services. However, it might be a curse when conditions in the public and nonprofit sector are unfavorable. Given that networks demand huge efforts and time while these might not reach the expected benefits, a more selective use of networks in this sector might be preferred.

In particular, we look at the impact of several characteristics of whole networks in the public and nonprofit sector, such as safeguarding public sector values, imbalanced power, and effectiveness of networks, on the development of affect-based and cognition-based trust in whole networks; taking into account the possibility that specific network structures (i.e. network-administrative organization, shared governance, or lead organization) might be more or less able to deal with potential dysfunctionalities in networks. Studying this will contribute to the network theory by revealing further under which conditions networks might operate successful. Our study contributes also in providing an empirical study as important complement to the large number of mainly theoretical studies of networks (Provan, Fish, & Sydow, 2007; Raab & Kenis, 2009). Although many of the studies are focusing on the public and nonprofit context, few actually focus on the particularities of this sector and its impact on the working of networks.

Starting from the mainstream articles on networks, we explain networks and their characteristics according to the theory, followed by literature explaining networks in particular in the public and nonprofit sector and the dysfunctions that might exist for those networks. We study this further in a sample of public, nonprofit and health care networks. Conclusions drawn from the empirical study add to a network theory for the public and nonprofit.

Whole networks

The reviews of Brass et al. (2004) and Raab and Kenis (2009) indicate the broadness of the network concept, ranging from interpersonal networks to networks among organizations. In our study, we focus on the latter inter-organizational cooperation. Provan et al. (2007), among others, use the concept of 'whole networks' to refer to the study of full inter-organizational networks, instead of looking at networks from a single organization in the network. We adopt the term whole networks here to emphasize our focus on the network as a whole. There are two main views on whole networks. One view sees networks as an organizational form consisting of nods (i.e., individual organizations) and ties (i.e., linkages between the organizations) (Brass, et al., 2004; Provan, et al., 2007). Provan and Kenis (2008:231), for instance, define networks as organizational form, i.e., networks are: "three or more legally autonomous organizations that work together to achieve not only their own goals but also a collective goal." The goal-orientedness is important here and distinguishes whole networks from social structures, and serendipitous networks (Raab & Kenis, 2009).

Another view sees networks as a third governance mechanism that adds to Williamson's (1975) two main forms, markets and hierarchies (Adler, 2001; Powell, 1990). While markets are governed by contracts and the pricing mechanism, and hierarchies through authority, networks are governed by trust (Adler, 2001). The existence of reciprocal relationships based on trust is a necessary condition for the existence of networks (Adler,

2001; Jarillo, 1988; McEvily, Perrone, & Zaheer, 2003; Newell & Swan, 2000; Podolny & Page, 1998). Powell (1990:303) writes that "the parties to a network agree to forego the right to pursue their own interests at the expense of others". Trust in networks is, thus, the belief that opportunism and power will not be (ab)used at the cost of others in the network. In this view, reciprocal trust relationships are the defining characteristic of networks, while in the organizational form view, trust is an antecedent of networks. However, in both views, trust is without doubt crucial for the existence, functioning, and success of the network. In this article we follow the governance approach and consider trust as key to the success of the networks; or in other words, we define network success in terms of the level of trust that can be established among network partners.

In their review articles, Mayer, Davis, and Schoorman (1995:712) and Dirks and Ferrin (2001:456) define trust in terms of 'risk of vulnerability' in a relationship between two parties. It is this willingness to take risks and be vulnerable that is key to networks, and especially to inter-organizational networks where relationships between organizations are risky and organizational control mechanisms or common mindsets (e.g. organizational identity) are missing. Although trust is mostly denoted as a rather static characteristic of a relationship, it is inherently dynamic in its nature (Lewicki, Tomlinson, & Gillespie, 2006). Edelenbos and Klijn (2007) studied trust in a public-private partnership and show that trust is not a stable characteristic of networks or an antecedent but a continuous evolving core network characteristic that is essential for the continuation of the network. Hence, the willingness to take risks and be vulnerable among network partners is likely to be unstable.

In attempts to measure trust, distinctions were made among different types of trust based on the antecedents or reasons why we trust others. McAllistar (1995) distinguishes between affect-based trust and cognition-based trust as the principal forms of interpersonal trust. Cognition-based trust refers to trust based on rational reasons and evidence that makes

us trust others. Affect-based trust is trust based on emotions and beliefs that others will care for the good relationship as well. Although McAllistar's trust dimensions are referring to interpersonal trust within an organization, similar dimensions can be observed in trust among people of different organizations or among groups of people and among organizations. Trust as a governance mechanism in networks, refers to trust between organizations in the network. Although personal networks might exist between members of the organizations in the whole networks, and different levels of trust might exist in these personal networks; our study focuses on trust-based inter-organizational relationships. The more professional and distant the relationships, as is often the case between organizations in whole networks, the less emotional and the more cognitive the relationship will become. Adler (2001), for instance, mentions that especially competence and integrity based trust instead of familiarity trust are important in networks. In Edelenbos and Klijn's (2007) case study, competence-based trust seems to be most relevant in the network. In the study of Newell and Swan (2000), commitment, companion and competence based trust turned out to be interrelated and can compensate for each other as governance mechanisms in networks.

In our study, it is not the purpose to study traditional antecedents of trust, such as interaction frequency, interaction history, familiarity, etc.; but to look at network characteristics that might leverage or impede the development of the two types of trust. There is consensus in the network literature on the fact that networks are based on trust, but less on other characteristics of networks that might be important for the existence and success of the network and for the development of trust in the network. In Entwistle et al.'s (2007) study on markets, hierarchies, and networks, they mention conditions for "ideal" forms of these three governance types. The conditions mentioned for networks are, based on Thompson (2003): equality, common beliefs and values, direct, many sided and reciprocal relationships. Brass et al. (2004) mention several important antecedents of networks, i.e., motives (legitimacy,

resources, uncertainty, or collective goals), learning experiences, norms and monitoring, equity (among the partners), and contextual causes. Hence, also the existence of a motive or contextual influence that brings organizations to the decision to engage in networks is mentioned as important. Podolny and Page (1998) try to go further by also looking at the conditions for network success but must conclude that research on network success is insufficient to list conditions for network success.

There are, however, a number of consequences of the network form frequently mentioned in the literature and generally accepted as the benefits of networks. Brass et al. (2004) list imitation (through information exchange and learning), innovation, survival (of the organizations in the network), and performance (of the organizations in the network). This is in line with Podolgy and Page (1998), who also mention learning and economic benefits among others based on legitimation and status of network membership. These consequences or benefits of networks are grounded in the trust aspect of networks but also in the flexibility and adaptability of the form (Agranoff & McGuire, 2001; Ekbia & Kling, 2005; Powell, 1990). However, flexibility in networks is still lower than in markets (Powell, 1990).

Network literature has mentioned the dysfunctions of networks as well. A number of dysfunctions were already mentioned by Podolny and Page (1998), such as: too intense network embeddedness, lack of network capabilities, level of task integration, and lack of similarity in culture and goals; but they emphasize the lack of empirical research on network dysfunctions. Meanwhile, several authors have elaborated further on network dysfunctions but the empirical evidence remains scarce. Castells (2000) writes that networks have clear benefits but also have difficulty in coordinating network tasks, resources, goals and managing the complexity that can be found in networks. In their review, Brass et al. (2004) mention several choices in network structures, such as strength of ties, level of centralization, and

closed or open networks, to indicate the complexity of network formation and the difficulty to build effective networks. Apart from the management complexity of networks, dysfunctions are embedded in the essence of networks, namely in trust. Trust is hard to establish and even when present trust remains vulnerable. Reciprocal trust relationships that are spread over the network replace the hierarchical unilateral control that exists in hierarchies (Adler, 2001). The more trust, the more profitable power abuse and betrayal becomes because the network is not armed with control mechanisms to deal with distrust and abuse (Adler, 2001). This vulnerability and power abuse is extensively illustrated with the Enron case by Ekbia and Kling (2005).

Particularities of public and nonprofit whole networks

Public management literature has been emphasizing and has given proof of the particularities of the public sector context, such as legal and political constraints that result in different organizational and management principles (Kelman, 2007). There are also typical characteristics of public sector networks, such as typical public sector values and objectives (De Bruijn & Dicke, 2006), higher frequency of mandatory networks and networks with imbalanced power (De Bruijn & Dicke, 2006; Milward & Provan, 2003), and complexity of network effectiveness (Head, 2008). An analysis of the influence of public values, imbalanced power, and effectiveness on trust results in a number of new untested relationships. In addition, we add network types as potential interacting influences. Figure 1 depicts the characteristics and hypotheses.

Insert Figure 1 Here

Public values

Several comparative studies have confirmed differences in values between the public and private sector (Hood, 1991; Lyons, Duxbury, & Higgins, 2006; Posner & Schmidt, 1996; Stackman, Connor, & Becker, 2005). These values are based on what public sector organizations are expected to do, namely serving the public and being accountable for the delivered services and resources used. Van der Wal et al. (2008) reviewed the literature on organizational values in the public and private sector with the intention to compare the value sets of both sectors. They also studied a set of twenty generic values in both sectors and concluded that there are indeed two distinct sets of values found in the two sectors but that there is also a large common core (Zeger Van der Wal, et al., 2008; Z. van der Wal & Huberts, 2008).

Lack of hierarchical control to safeguard public values

Public sector organizations face institutional pressure related to these values and accountability in particular (Klijn & Skelcher, 2007). To be legitimate, public and nonprofit organizations need to meet the expectations of the stakeholders and in particular the public, which are reflected in the public sector values. The relatively high importance of values such as honesty, fairness, and equity, compared to more economic and parsimonious values, such as cost control and goal orientedness, demands a different organization design type and governance structure. Traditionally, public sector organizations have rigid control mechanisms. In particular, more use of bureaucratic designs (Olsen, 2006; Willem & Buelens, 2007) and a focus on processes rather than on output are required to safeguard public sector values (Harmon & Mayer, 1986; Hood, 1991). Characteristics of more bureaucratic structures and processes are conflicting with the trust-based control and decision-making, decentralization, and horizontal coordination in networks. Establishing rigid control mechanisms might even impede trust because establishing such control in networks could be perceived as a signal of distrust. Public sector values, such as accountability to the public,

impartiality, lawfulness, and social equity might be hard to control in networks that typically tend to be voluntarily and lacking formal authority and supervision on network members' activities (Provan & Kenis, 2008). The lack of bureaucratic control with rules and hierarchy might thus be constraining the possibility to organize activities in public sector networks (Kelman, 2007).

Thus, the public sector context and accountability expectations, demanding close control and power over the decisions, are constraints for network development. However, networks can also give organizations more legitimacy, especially nowadays when networks seem to become the norm in the public and nonprofit sector. Legitimacy, especially through organizational and instrumental isomorphism that are important explaining factors for the behavior of organizations in the public sector, might result in more or less innovative behavior (Verhoest, Verschuere, & Bouckaert, 2007). A network is a form of innovation in governance in the public sector.

Furthermore, when public values are not safeguarded in the network because of the lack of bureaucratic control, the presumed positive effects of networks through higher performance and better services might not be guaranteed. It is through safeguarding public values that the quality of public services can be guaranteed. We, therefore, assume that the more the typical public sector values are important for organizations in the network, the harder trust is established among the organizations because of the loss of control to safeguard public values. While private sector organizations might have values that need to be safeguarded in their networks as well, we assume that especially the public values, such as lawfulness, incorruptibility, and impartiality, are more difficult to protect in networks. Some of the more private sector values, e.g., innovativeness, are actually easier to reach in a flexible horizontally managed network than in hierarchies.

H1: The more important public values are for the organizations in the network, the lower the levels of trust among the organizations in the network.

Values incongruence

Research shows that values differences among organizations can be large (Zeger Van der Wal, et al., 2008). Hence, in networks and especially in networks of mixed composition (public and private sector organizations), significant differences in values sets might be found. Such mixed compositions are often required for public service delivery. Differences in values might make it hard for organizations to cooperate in the network. It is clear that the more equal the values, the fewer conflicts and the easier trust develops. In public-private partnerships, values incongruence is expected to be larger because public sector organizations will most certainly have more public sector values while the private partner will most likely have more private sector values.

H2a: The higher the values distances, the lower trust among organizations in the network.

H2b: Public-private partnerships have higher values distances, and, hence, lower levels of trust compared to non public-private partnerships.

Flexibility in government networks

As mentioned, benefits of networks are situated in flexible and horizontal decision-making and coordination (Brass, et al., 2004; Podolny & Page, 1998; Powell, 1990); while trying to reach legitimacy, accountability, and safeguarding values require control systems that are more rigid and push the organization toward more stability (Kelman, 2007). Governmental agencies will try to keep control by implementing rules and control mechanisms that push networks toward stability and even bureaucracy. Especially in a public

sector context, where decision-making can be very complex and require the cooperation of many different parties making traditional organizational forms or unstructured cooperation insufficient for the cooperative challenges, networks are proposed as the flexible solution (Agranoff & McGuire, 2001; Klijn, 2008). It is especially the possibility to allow decision-making and service delivery in a more flexible way that makes networks an attractive governance form. Thus, organizations engage in networks and choose the trust-based governance form because of this benefit. However, when organizations participating in the networks feel that the network is a rigid bureaucratic instrument similar to their own organizations or decision-making systems, trust will decrease rapidly. We expect that in public and nonprofit networks flexibility might be harder to maintain because of the typical characteristics of these networks that push the networks toward a stable rigid form. Because of this tension toward a more rigid controlled network, we expect trust to be low, but in case flexibility can be maintained in public and nonprofit networks, this will have a positive effect on trust. A direct relationship between flexibility and trust is not yet discussed in the literature but we assume here that flexibility is crucial to the success of the network and, therefore, to trust within the network.

H3: The higher flexibility in the network, the higher the levels of trust among the organizations in the network.

Imbalanced power

While it seems quite obvious that organizations engage freely in networks or opt--for the presumed benefits--for the network form as coordination type, many mandatory networks exist among public and nonprofit sector organizations. Governments use networks to solve complex decision-making problems and service delivery; and therefore, the network form is imposed on organizations, especially nonprofit ones that are needed for dealing with these

complex problems. Hence, to some extent, government uses its power to force network development into certain important sectors, such as healthcare or environmental and energy businesses, to be able to reach its own goals. In sectors of industry that rely on public funding, such as education, research, or healthcare, government also imposes networks to economize on resources, and often government demands networks or a consortia of organizations to collaborate before funding is granted. Government that uses profit and nonprofit organizations to produce taxpayer funded goods and services is labeled as the "hollow state" by Milward and Provan (2003), indicating the shift of tasks and responsibilities for public services toward (non-government) third parties. There are hardly any studies on the effect of the mandatory character of networks on the working of networks but the scarce literature indicates that mandatory networks might be highly different from voluntary networks (Kenis & Provan, 2009). The question then arises whether such mandatory networks fulfill conditions of effective networks, in particular, establishing sufficient levels of trust. Developing trust in networks requires that partners voluntarily engage in the network, being convinced of the benefits or necessity of the network. Participating for the right reasons is crucial for network success. There is little guarantee that organizations might trust each other when obliged to work together, especially when there are no past collaboration experiences among the partners. For instance, in healthcare sectors, where networks are very common (Perri, Goodwin, Peck, & Freeman, 2006), networks can also be seen as a threat to a tradition of autonomy of organizations and medical professionals (Heen, 2009). In such cases, developing trust in mandatory healthcare networks is not obvious. We assume that developing trust will be harder in mandatory networks but when sufficient trust can be developed mandatory networks might work just as well as non mandatory ones.

H4: Mandatory networks have lower levels of trust among the organizations in the network.

As mentioned, a positive consequence of networks is that it can reduce uncertainty for the organizations in the network. However, this might not be the case for all kinds of organizations and especially not for public sector organizations. While public institutions might be in a vertical hierarchical regulatory relationship with other organizations and lower level governments, in a network setting this kind of hierarchy disappears and inequality becomes equality among the organizations in the network. While this might be interesting for some organizations that find themselves on equal ground in discussions with governments, governmental agencies lose some of their decision-making power (De Bruijn & Dicke, 2006). This in turn leads to uncertainty for the governmental agencies. From a public interest perspective, such a situation might even be a threat to democracy, because citizens gave power to governments, and governmental agencies cannot just delegate this power to other organizations in a network setting (Klijn & Skelcher, 2007). Power in networks shaping decision-making and policy development might thus deviate from the more democratic power in traditional governmental institutions. In other words, power in networks can shift toward more private interests and private sector partners in the network, which can be especially problematic in networks for policy development (Klijn & Skelcher, 2007).

O'Toole (2004) mentions the distributional consequences of network actions for the different stakeholders. He also emphasizes that politics are overly present in public administration and it is to be expected that the political dynamics become even larger in a networked context. Equality and lack of power dominance are considered as conditions for networks; however, from a democratic stance, inequality and dominance of governmental agencies in networks might be favorable. Consequently, in that case, network conditions are no longer fulfilled and trust in the network is no longer guaranteed. Trust might already be fragile when public, private and nonprofit organizations have to collaborate in networks. Because of the particular difficulties in establishing trust in networks that consist of

organizations situated at different regulatory levels (vertical networks), we assume lower levels of trust in vertical networks compared to horizontal ones.

H5: Trust among organizations will be lower in vertical networks compared to horizontal networks.

Power exists in all organizations but is of utmost importance in networks because of the complex decision-making and inequality among partners in networks. Networks, largely built on trust, are very vulnerable to power use and influencing. Often, networks also miss control mechanisms that help against power abuse. Furthermore, power is closely intertwined with trust because the existence of trust allows the use of power (Adler, 2001). However, power might be functional in a number of situations as well (Agranoff & McGuire, 2001). Agranoff and McGuire (2001) explain that power has a dual role, either facilitating or preventing actions in networks. Veto power is a type of power typical for networks. Each partner in the network has veto power to object to a decision or even to exclude partners from the network. Such power can be dysfunctional for the performance of the network. Power can be beneficial if it helps decision-making in an environment with many different goals and contradictory interests. For instance, the dominant player in the network can impose decisions and prevent the network from paralyzed decision-making due to too many opposite interests. Heen (2009) uses the term “power to” as opposed to “power over” to indicate the functionality of power to get things done in a network setting. A large power imbalance resulting in strong influencing from one partner over the other partners can thus have its benefits but we expect in the long run that power imbalance will endanger continuity and performance of the network, and especially endanger the presence and persistence of high levels of trust. In sum, although power, normally considered as being dysfunctional in networks, can be functional to allow decision-making or to allow governmental agencies to keep some of their power granted

through the democratic political system we expect that the more power in networks, the lower the trust in the network.

H6: The more power among the organizations in the network, the lower the level of trust among the organizations in the network.

Network effectiveness

In discussing the functionality of networks, effectiveness or goal attainment is important. Networks are functional to the extent that the network is serving its purpose. Several authors have engaged in the discussion on network effectiveness (Head, 2008; Koppenjan, 2008; Provan & Kenis, 2008; Provan & Milward, 1995), and public network performance (Kenis & Provan, 2009; Voets, Van Dooren, & De Rynck, 2008), resulting in a multi-dimensional approach toward network performance (Mandell & Keast, 2008). Following Provan and Kenis (2008), network effectiveness can be described broadly as "the attainment of positive network level outcomes that could not normally be achieved by individual organizational participants acting independently." These outcomes can be of any kind (i.e., process, input or result oriented) (Voets, et al., 2008) and on any level (i.e., the individual organization, the network, the society) (Provan & Milward, 1995). Different organizations have their goals and the network itself has its goals. Especially for public and nonprofit networks, the institutional context adds even more goals. Kenis and Provan (2009) further argue that network performance could be assessed better exogenously instead of endogenously because in an endogenous view on performance the existence of a common goal and goal attainment within the control of the network (its management or member organizations) is assumed. An exogenous view takes a more distant and objective view on networks from a larger society perspective. The very recent discussion on network performance teaches us especially that network effectiveness is rather problematic in a

network context and echoes the difficulty of assessing the effectiveness of public services and public policy (Head, 2008; Koppenjan, 2008). Hence, within networks there are multiple goals and there is often a lack of goal clarity grounded in the difficulty to define and assess effectiveness criteria for the public and for nonprofits. Notwithstanding the vagueness in goals, all organizational networks have some kind of common ground for their existence and partners in the network might feel that the common purpose is more or less reached. The more organizations perceive the common purpose as being achieved, the more trust will evolve among the organizations in the network. Through this network success, trust is built. This goal achievement will be a proof of competence and future benefits that might be expected (Edelenbos & Klijn, 2007). Furthermore, networks that are able to overcome the difficulty of defining network effectiveness might have an advantage because in such networks network successes might become more clear.

H7: The higher the effectiveness of the network, the higher the trust among the organizations in the network.

Network types

Does this all question networks for the public and for nonprofits? Several authors argue that much has to do with how and how well the network is organized and managed. Provan and Kenis (2008) indicate that networks can and should be managed, and can even take a formal structure, a network administrative organization (NAO), allowing the application of management tools. However, Agranoff and McGuire (2001) mention that it is not only control that is missing in networks but a whole range of traditional management instruments that organizations can use. The kind of management possible in whole networks is of a different kind and is more based on information flows than on authority (Agranoff & McGuire, 2001). Hence, management possibilities are more limited than in traditional

hierarchies. Nonetheless, literature provides proof and suggestions of the manageability of networks.

Heen (2009) studied different management styles in mandatory healthcare networks, finding that management style influences the distribution and use of power in the network. She also questions whether networks are appropriate for organizing primary medical services but at the same time admits to having no other solution than the network form. Provan and Kenis (2008) argue that an appropriate network structure can deal with potential dysfunctions in public sector networks. They identify three types of networks with their particular network management characteristics and decision-making structure. Participant-Governed networks or networks with shared governance are governed by the members themselves. These networks fit into an environment with high levels of trust, few participants, goal consensus among the partners in the network, and when few network-level competences are required. The network type is characterized by decentralized decision-making, responsibility, and network management. Lead organization-governed networks are governed by a leading partner in the network and are fitting environments with lower levels of trust, a moderate number of participants, somewhat lower levels of goal consensus, and with moderate levels of network competences required. The leading partner in the network bears the responsibility, administrative burden, and management tasks of the network. This leading partner has a major impact on decision-making, creating a centralized organizational form. Externally governed networks are governed by a separate network administrative organization (NAO) that is established to manage the activities of networks. It fits under circumstances of moderate levels of trust, larger numbers of participants, rather high goal consensus, and when high levels of network competences are required. In this kind of network the network administrative entity bears final responsibility for the network's decisions and tasks, resulting in a centralized structure. The NAO is leading the network and has certain autonomy. The

relationships mentioned in the previous paragraphs might be moderated by these network types.

The dominant organization in the lead organization network will impose its values on the whole network and might even influence the values of the other organizations in the network. This network type will solve value conflicts by imposing its own values as the dominant ones. In that sense, values conflicts are reduced between the organizations in the network, and between the organization and the network. However, smaller organizations in the network with different values from the ones of the dominant organization might feel threatened by the dominant organization. Hence, the dominant role played by the lead organization might also emphasize value differences. The NAO is characterized by its independence and this independence might be reflected in the development of an own values set that might deviate from the values of the organizations in the network. However, due to its formal controlling and coordinating role, the NAO might be able to bring organizations together even if these organizations have different value patterns. Hence, we make a distinction between value differences among the organizations for which the NAO might be a solution, and value differences between the organization and the network that would be increased by the NAO. The shared governance network form will be perceived as less threatening in case of large values differences because each organization may be able to safeguard its values within the shared decision-making processes, while the dominant values sets developed in NAO and lead organization networks might be threatening and might emphasize values incongruences.

H8: The higher the values distances in NAO or lead organization networks, the lower trust among the organizations in the network.

The success of the network type might also depend on the kind of values that are important for the organization in the network. Typical management values, such as effectiveness and profitability, might be easier fulfilled in a NAO, which can operate due to its independence in a highly effective way. Accountability values might also be easily dealt with in a NAO because the NAO as an organization can be held accountable for its deeds. The same goes for the lead organization network where the dominant organization can be held accountable for the whole network. Hence, different types are optimal depending on which values are most important for the organizations in the network. Typical public sector values, such as serviceability and social justice, might be more easily safeguarded in a shared governance network. Bryson et Al. (2006) explain that networks can better achieve public values when each organization in the collaboration can keep its own interests and build on its own strengths. In a shared governance network type, each organization might be able to protect its unique values, e.g., against a tendency toward more private sector values. Managerial values might be less easy to cope with in this kind of network, e.g., effectiveness might be reduced through the shared decision-making.

H9: The more important public values are for the organizations in the network, the higher trust among the organizations in the shared governance networks compared to the NAO or lead organization networks.

The NAO might be able to balance the influence of the organizations in the network, while the lack of an administrative body with decision-making power in the shared governance network makes such a network vulnerable for power games and influencing among the organizations in the network. Government agencies might prefer the lead organization network type when this allows them to take the lead in matters that are highly sensitive for the public interest. In general, however, public-private partnerships, vertical networks, or

networks characterized by high levels of power might benefit from a NAO structure to keep interests balanced.

H10: Trust among organizations in the network will be higher in NAO network types than in shared governance or lead organization networks when: power is high, networks are vertical, or are public-private partnerships.

No network form is able to perfectly balance stability and flexibility (Provan & Kenis, 2008). NAO and lead organization networks have a stable administrative body able to create stability. There will be tension toward increasing stability because the dominant organization and the NAO will try to keep control through formalization and might even introduce certain levels of bureaucracy in the network. Shared governance networks do not have the formal administrative body and, therefore, have more tension toward flexibility. In the public and nonprofit context, where a tendency toward bureaucracy exists, shared governance networks might be more appropriate to counterbalance this tendency. Hence, we assume that having sufficient flexibility is especially important in the NAO or lead organization type where there is a risk of evolving toward bureaucracy.

H11: The higher flexibility in the NAO or lead-participant network type, the higher the levels of trust among the organizations in the network.

Mandatory networks might face difficulty in developing trust. Low trust situations require NAO's or lead organization networks (Provan & Kenis, 2008). The latter only holds in the assumption that the lead organization is trusted by the other network partners.

H12: Mandatory shared governance networks have lower levels of trust among the organizations in the network compared to mandatory networks of the NAO or lead organization types.

The NAO seems to solve some of the dysfunctions in networks; however, this is done by creating an organization that clearly has characteristics of hierarchies. This network type, therefore, also suffers again from the dysfunctions of hierarchies. While network literature clearly indicates that networks are distinct forms of markets and hierarchies (Entwistle, et al., 2007), NAO's are not fully distinct. This form is an organization in itself and can be a first step toward integration of the network partners into one organization - one hierarchy. In shared governance forms, contracts are often used, which are instruments of markets. Entwistle et al. (2007) explain that especially government networks have difficulty in developing real networks that are not just forms of markets or hierarchies. The NAO, for instance, might still be a network in an organizational form view, but might not be a network anymore in the governance view. Maybe Williamson (1975) was right after all, and there are only two types of governance that can be mixed to hybrid forms. Trust as a governance mechanism might be too difficult to establish and maintain, especially in public and nonprofit networks. In this vein, dealing with dysfunctions of networks in the public and nonprofit sector can be brought back to the right mix of market and hierarchy elements. Especially because of the dysfunctions typical for this sector (for instance the often very formal mandatory networks), the networks seem to be far from the ideal network forms and rather close to either the market or hierarchical form.

Method

To test our hypotheses, a quantitative multilevel research strategy was applied. Cross sectional data, gathered through structured interviews and closed questionnaires, were

collected among a diverse range of whole networks in the public and nonprofit sector, including healthcare.

Sampling

Networks were selected in the public and nonprofit sector in Belgium. A sampling frame with lists of networks in these sectors did not exist. Some more formal networks had information on web pages and might have been widely known. However, most networks were not visible for outsiders. It was known in which sectors networks were more or less popular and, therefore, which organizations might have been involved in networks. For instance, we knew that the healthcare sector in Belgium had many networks. Therefore, this nonprofit sector provided us with a useful setting for sampling networks. Local governments such as municipalities were also involved in a large amount of networks. Since random sampling methods could not be applied, we used convenience sampling. Students of the Master in Management for Public Sector Organizations and of the Master in Management and Governance of Health Care Organizations assisted in searching whole networks and in collecting data in these networks. Through their field contacts with people in organizations that were involved in networks; in particular, local government networks and healthcare networks, networks were identified and selected when meeting the criteria. The criteria for including a network in the sample were following the definition of networks of Provan and Kenis (2008) and our focus on the public and nonprofit sector: at least three legally autonomous organizations in the networks, a common goal or purpose for which the network is established, and at least one public or nonprofit organization in the network that is taking an important role in the network. A large and diverse range of networks met these criteria. This resulted as expected in a diverse sample representing many different kinds of networks. We particularly aimed for this diversity.

The sample consisted of 54 networks with a network size ranging between 3 and 127 participant organizations in the network. Most networks were rather small. Half of the selected networks had less than 10 organizations in the network. A first contact with a representative of the network allowed us to collect information about the network's activities, aims and composition. In each network a representative member, the coordinator, chair or manager in the network was contacted for a semi-open interview. Next, a representative in each organization that participated in the network was selected to complete a closed questionnaire. This representative had to be actively involved in the working of the network. On average 58 percent (ranging between 7 and 100 percent) of the participant organizations in the network were willing to participate in the study with a minimum of three organizations per network. Examples of smaller networks are local schools, hospitals or environmental pressure groups that like to co-ordinate their tasks. Examples of larger networks are found in healthcare and in other personal care organizations, e.g., elderly care or crisis youth care. There was some level of communality in the goals of the networks. All networks aimed for some kind of coordinating and alignment among the organizations activities, for instance, for integrated health care or integrated service delivery to some group of customers (e.g. young criminals, or deprived). However, the alignment was not free of obligations. Although the engagements expected from the organizations in the networks differed; all networks demanded an engagement that went clearly further than information sharing, and for some networks this involved common activities on the network level or sharing resources. However, the organizations were not really dependent for their normal activities; meaning that failure of the network would not endanger the continuation of each of the participating organizations' activities. Only 13 networks were really mandatory networks but many networks were formed because of indirect pressure caused by regulatory rules or because the organizations got recognition, a voice in local policy-making or funding when collectively organized. In our sample the regulatory pressure to collaborate in a network organization

always came from the Flemish regional government. Nonprofit organizations were most frequent among the participants in the networks and 19 networks consisted only of nonprofit organizations. Other networks were a combination of public and non-profit organizations and in 12 networks private partners were involved. The public agencies involved were mostly local governmental agencies or municipalities. Twenty four networks are healthcare networks. These healthcare networks were younger networks than the other networks in the sample. Our sample consisted of 14 NAO's, 8 lead organization networks and 32 shared governance network types. There were 8 networks that involved different levels of public administration and could therefore be considered as vertical networks.

Measurement

The semi-open interviews allowed us to collect information to code each network on the following dimensions: mandatory, vertical or horizontal, public-private partnerships, and network type (NAO, shared governance, or lead organization). Mandatory networks are networks that are mandated by a governmental agency or by regulations. Lists with the participating organizations in the networks allowed us to determine whether the network was vertical or horizontal, and whether the network had participants from the private sector. We asked closed questions during the interview related to “Who co-ordinates the network tasks?” “Who is responsible for the network management and the decision-making process?” “Is network governance centralized or decentralized?” and “Who is responsible for the network?” Answers to these questions allowed us to determine whether the network had a NAO, shared governance or lead organization form by applying the categorization of Provan and Kenis (2008). When a network had characteristics of more than one type (in 13 of the 54 networks this was the case), we choose for the type that the network was closest to (most characteristics of this type).

Network studies are typically multilevel studies because of the study of organizations embedded in the network (Brass, et al., 2004). Some of our hypotheses are multilevel, including the organizations and the network, while some are on the organization level only. Our dependent variable is trust among the organizations in the network and is, therefore, an organization level variable. Trust is a trait of organizations in the network because it is the organizations that trust the other organizations in the network; hence excluding interpersonal trust among leading persons in the networks. Power, flexibility, values distances, and publicness of values were the independent variables on the organization level. Public-private partnership, vertical network, mandatory network, network type, and network effectiveness were the independent variables on the network level. The control variables (age, size and sector of the network) were also on the network level.

Our independent variable trust was measured on five point Likert scales as affect-based trust, and cognition-based trust using an adapted version of the scales of McAllister (1995). Power was measured with the existing scale of influence from Gresov and Stephens (1993). Flexibility was a new scale following closely the theoretical description of the flexibility aspect of networks described in the article of Provan and Kenis (2008).

To measure what kind of values were important, we used the generic values list of van der Wal et al. (2008). This list consists of 20 generic values that can be found in organizations in both the public and nonprofit sector. Respondents were asked to give the five most important values a number from one to five with one being the most important value and five being the least important value. The generic values were: accountability, collegiality, dedication, effectiveness, efficiency, expertise, honesty, impartiality, incorruptibility, innovativeness, lawfulness, obedience, profitability, reliability, responsiveness, self-fulfillment, serviceability, social justice, sustainability, and transparency. Each value was briefly explained in a short sentence in the questionnaire. We recoded all the values into

dichotomous variables with 1 representing a "value that is among one of the five most important values for that respondent" and zero for not among the five most important. Next, using multidimensional scaling, we calculated matrices with distances between the values sets of all organizations in the network. For each organization, an average of the distances between that organization and the other organizations in the network was calculated. The higher this score, the more the main values set of the organization differed from other organizations in the network. The average of all values distance scores was 0.92, ranging from 0.64 to 1.22.

Van der Wal et al. (2008) found that only a few values discriminated among the private and public sectors. The values of lawfulness, incorruptibility, and impartiality were typical for the public sector, while profitability, honesty, and innovativeness were typical for the private sector. We calculated to what extent public values were important for the organizations in the network. This was done by counting the frequency of the three pure public values among the five most important values that each organization indicated.

Public-private partnership, vertical network, mandatory network, and network type (NAO, shared, lead), were dummy variables in our analysis. Network effectiveness was for validity reasons measured in two ways. In the interviews, we asked: "Based on the evaluation of the network's results, has the network been successful until now?" "How successful is the network in your opinion?" and "How successful is the network for your organizations or the organizations in the network?" The answers from these interview questions were coded on a five point scale by the researchers. In the questionnaire, we asked respondents to rate three items on a five point Likert Scale indicating the success of the network. The responses from the different organizations in each network were aggregated to one score per network. Networks often lack a formal evaluation of their working. Therefore, we asked in the

interviews and questionnaires about more formal success indications and about the success of the network according to the more personal opinion of the respondent. The latter was especially important in case network outcomes were not evaluated formally, and only subjective opinions on the success of the network existed.

Network size is the number of organizations participating in the network. The sector is a dummy, indicating whether the network belongs to the healthcare sector or not. The reliability scores (Cronbach alphas) for the variables of trust, power, and network effectiveness are all above 0.7.

The full measurement instrument, including interview questions and questionnaires, were tested for internal validity in three networks by asking respondents to complete, evaluate, and discuss the usability of the instrument with the researchers. Table 1 lists descriptive statistics and correlations among the variables. We calculated correlations for all variables, including the two levels of organization and network. Therefore, the network-level variables were assigned to each organization within the network. The number of organizations per network ranged from 3 to 31. Hence, some larger networks would have disproportionately influenced the correlation scores. This was solved by weighting the cases so that each network was treated equally.

Insert Table 1 Here

Results

Significant correlations were found between affect-based trust and, respectively, flexibility, cognition-based trust, and power. Cognition-based trust also correlated with flexibility and network effectiveness.

To test our hypotheses, we applied hierarchical linear modeling. The variables of size and age were centered on the median value to decrease the range of these two variables. We ran the model twice, once with affect-based trust as the dependent variable and once with cognition-based trust as the dependent variable. Both types of trust were correlated (0.49) but were also clearly two distinct types with possibly different relationships with the other variables. Literature suggests that both types are important but might be interchangeable. Hence, some networks might function well because of high levels of cognition-based trust, while other networks perform just as well due to high levels of affect-based trust. Therefore, it was useful to test our hypotheses for both types of trust. Cognition-based trust was included as the independent variable for the model with affect-based trust, and affect-based trust was included as the independent variable in the model with cognition-based trust. Table 2 displays estimates, standard errors and t-values for both models for each of the hypotheses tested.

Insert Table 2 Here

The model with affect-based trust as dependent variables had an intra-class correlation of 0.21, indicating that 21 percent of the variance in affect-based trust was explained by the network level. Affect-based trust was influenced by the size of the network. Larger networks resulted in significantly lower levels of affect-based trust. The other two control variables, health care sector and age, had no effect. The presence of public sector values among the top five most important values had no effect on affect-based trust; hence, hypothesis one was rejected. Values distances among organizations in the network, public-private partnerships or the interaction between public-private partnerships and values distances had not an effect on affect-based trust, rejecting hypothesis 2a and 2b. We also found no indications that values distances were larger in public-private partnerships. The mandatory network did not seem to

cause lower levels of affect-based trust, rejecting hypothesis 4. Vertical networks mattered more for the level of affect-based trust because trust was lower in a vertical network, accepting hypothesis 5 with a significance level of $p<.01$. The organization-level variable flexibility is clearly significant. More flexibility related to more affect-based trust, supporting hypothesis 3. The variance of the random slope was very small ($\sigma^2_{u1}=0.01$, s.e.=0.02) and, thus, there was no reason to believe that the relationship between flexibility and affect-based trust differed in the different networks and that the relationship might have been influenced by a network-level variable. The relationship between power and affect-based trust was significant but positive, indicating that more power went together with more affect-based trust. This was opposite from hypothesis 6, which was thus clearly rejected. The estimate for the variance of the random slope of power in the different networks was low ($\sigma^2_{u1}=0.01$, s.e.=0.02), indicating that slopes did not vary significantly between networks. Hypothesis 7 on network effectiveness was not supported. There were no interaction effects found with the network types, NAO, lead and shared governance, and the different independent variables on the dependent variable, affect-based trust. Hypotheses 8, 9, 10, 11, and 12 were not accepted.

We performed the same HLM analysis for the dependent variable cognition-based trust. In this model, 20 percent of the variance of cognition-based trust was explained by the network-level. Contrary to affect-based trust, none of the control variables was significant. Hence, cognition-based trust seemed not to increase with the age of the network. Hypothesis one about the presence of public values among the five most important values of the organization in the network did not influence the level of cognition-based trust, rejecting the hypothesis. There was also no support for hypotheses 2a and 2b on the influence of values distances and public-private partnerships. Flexibility was clearly not only influencing affect-based trust but also cognition-based trust, supporting hypothesis 3. The variance of random slope for flexibility was zero, indicating no different slopes among networks. Mandatory networks

generated no different levels of trust, rejecting hypothesis 4. Vertical networks also had no effect on cognition-based trust, while the existence of a vertical network mattered for affect-based trust, resulting in mixed findings for hypothesis 5. Testing hypothesis 6 also lead to mixed findings because there was no relationship between cognition-based trust and power. Again, contrary to the result for affect-based trust was the relationship between network effectiveness and cognition-based trust. Higher network effectiveness went together with higher cognition-based trust, supporting hypothesis 7. Network types did not affect the relationships between the network-level or organization-level variables and the dependent cognition-based trust. Hence, no support was found for hypotheses 8, 9, 10, 11, and 12.

Figure 2 depicts the relationships that were significant. For clarity reasons we left out the interactions with the network types because none of these resulted in confirmed hypotheses. The dotted line shows the significant relationship between power and affect-based trust but in the opposite direction then was proposed.

Insert Figure 2 Here

Discussion

There are several particularities described in the literature related to organizations and networks in the public and nonprofit sector, such as the importance of safeguarding the distinctive values set, imbalanced power, and broadness and vagueness of goals. We claimed that these particularities might play an important role in the functioning of networks and can even endanger the possibility to use networks in the public and nonprofit sector, although an adequate network type and management might reduce potential dysfunctionalities. Our

empirical study did not provide support for such a highly critical view of networks but revealed some other interesting findings.

A major issue in public management literature is the values of the public and nonprofit sector, which are currently topical in the discussion on the existence of public service motivation (Boardman & Sundquist, 2009). In our study, no evidence was found that the presence of public values among the five most important values of the organizations in the network influence the working of the network. Even when considering public-private partnerships where values differences and even values conflicts might be expected, there was no effect on our outcome variable of trust. The extent to which organizations had different values, whether public, private or mixed, seemed not to matter. This might indicate that network partners can easily overcome values differences or that values do not matter that much for the organizations in the network. Van der Wal et al. (2008) did find values differences among sectors but the differences were not that large and many values were common to both the public and private sectors, which might indicate that values differences are just not large enough to have an impact on the development of trust. Furthermore, because the networks are inter-organizational, values differences are inherent to the network form and the presence of values differences might be so evident that organizations participating in the network consider these differences as a non-issue having no effect on their level of trust. Another view is that networks might be better able to achieve public values and to deal with values differences than other more traditional governance mechanisms (O'Flynn, 2007).

Public and nonprofit organizations are also known for their process control, hierarchy and (bureaucratic) rules, which might conflict with the horizontal and flexible co-ordination and lack of control in networks. Hence, although flexibility is crucial in networks, it might be hard to establish and, therefore, a particular positive relationship with trust is expected for

networks that are able to be flexible even when their organizations function in a more rigid bureaucratic structure. Here, our data was very clear; flexibility is indeed important for trust in the networks. The fact that the organizations in the network felt that the network was a flexible form, often different from their own more rigid organizational form, resulted in the development of trust among the organizations. Organizations likely perceived the flexibility as proof that a horizontal way of working adapted to the environment is possible even in their sector. Hence, we can conclude that the organizations in the network perceive flexibility as positive and that these organizations do not find such flexibility a threat to the so-highly valued accountability or controllability. Networks fit within the new public management and later public management evolutions that explore new forms of public management and public service delivery (Hood & Lodge, 2004; O'Flynn, 2007). There have been many critics of the new public management principles and especially of the effects and realizations in practice (Hood & Peters, 2004). The clear relationship that we found in our study between flexibility and trust shows that applying a flexible non-traditional bureaucratic governance mechanism increases trust among public and nonprofit organizations. Hence, although the organizations might not be used to operate in a highly flexible governance form, the organizations do not distrust it; quite the contrary. We can thus say that at least this kind of flexibility within the new public management trend is perceived positively. Entwistle et al. (2007) show that networks in the public and nonprofit sector suffer from dysfunctions of markets and hierarchies, indicating that networks need to be more pure networks instead of a mixture of the traditional forms. This pure network form is characterized by flexibility (Ekbia & Kling, 2005). Thus, we can see in the strong relationship between flexibility and trust indirect evidence for the conclusion of Entwistle et al. (2007) that only real networks, which are clearly distinct from hierarchy, are successful. Hence, although it might make sense from a public management perspective to form networks as a mixture of hierarchy and horizontal

collaboration to be closer to the traditional bureaucracy, the pure highly flexible form similar to networks in the private sector seems to be preferred.

There is no relationship found between the mandatory character of the networks and the levels of trust. This is not that surprising because the contact with network representatives taught us that most networks had some kind of mandatory character but only a few were officially mandated. Networks were formed to get recognition, to obtain a voice in decision-making, or to get funding. In that sense, networks are all formed because the organizations felt that the network was a kind of requirement demanded by governments. Organizations felt that collaborating in networks was the appropriate or expected way of working in the current environment. There was some kind of organizational isomorphism to obtain legitimacy and also an instrumental isomorphism to be congruent with the prevailing expectations (Verhoest, et al., 2007). Hence, there was not much difference between "formally mandated" and "mandated through strong isomorphic pressure."

Interesting is the relationship between the vertical character of the network and affect-based trust. Most networks were perceived as mandated but in some of these, government agencies of a higher hierarchical order acted as a partner in the network. This kind of involvement was clearly felt as threatening and as a limitation to cooperation. The presence of higher order governmental agencies only had an impact on affect-based trust, the kind of trust that is most based on being willing to be vulnerable, familiar, and affectionate. This kind of distrust should be viewed in the context of a general distrust of government and regulators. Saz-Carranza and Serra (2009) refer in that sense to institutional distrust in governments by private partners and vice versa. Furthermore, the presence of a local governmental agency and a regional or other higher order governmental agency brings hierarchy and authority into the

network, which can lead to distrust. Partners in the network might also not believe that the higher order governmental agency will forego its regulatory and control power.

Unexpected mixed findings were observed with the variable of power. Power had a significant effect on affect-based trust and a negative but not significant effect on cognition-based trust. The effect on affect-based trust was positive. The literature already suggested that power can be functional to some extent in networks. This might be the case especially when power is influencing partners in a positive way or in a way that the partners' work improves. Power is operationalized here in terms of influence, and influence is less negative than power. Nonetheless, even influence could be perceived as threatening for affect-based trust. This positive relationship sheds new light on the importance of power and on the relationship between power and trust in networks. Agranoff and McGuire (2001) already indicated power in networks as "neutral" because of the duality of facilitating and hindering cooperation. Our findings indicate that the balance might be positive and a minimum level of power might even be important for the working of networks.

A quite obvious relationship was expected between network effectiveness and trust because networks that are successful reach the common goal and might gain the trust of the organizations in the network. This relationship only holds for cognition-based trust, or the more rational side of trust. Proved successes reflect the professionalism and competences of the organizations in the network, and competences are an antecedent of cognition-based trust (McAllister, 1995).

Network types had no effect on trust, nor could these moderate the relationships between the independent and dependent variables. Hence, network type could, for instance, not reduce the negative effect of vertical networks. Provan and Kenis (2008) suggest that certain network

types fit better in higher trust and other types in lower trust situations. In our sample there was no evidence that different network types matched different levels of trust.

Following the findings in Newell and Swan (2000), cognition-based and affect-based trust are highly related. The two types of trust can be complementary, e.g., low affect-based trust due to a vertical network can be compensated by high cognition-based trust that seemed not to be affected by the vertical character of the network. Especially cognition-based trust is manageable (Edelenbos & Klijn, 2007). Hence, low levels of affect-based trust can to some extent be compensated with high cognition-based trust. Although the latter might be more often present in networks--probably because the former trust type is harder to establish--there is no reason to expect that one of the two types of trust is better for the network. Affect-based trust might be stronger but also more fragile.

Conclusions

Starting from a critical stance toward networks in the public and nonprofit sector, given the fact that some particularities of the sector might conflict with the conditions for inter-organizational networks or might impede the functioning of networks, a number of relationships were proposed and tested in a multilevel study. The results indicate that networks do not suffer that much from the suggested dysfunctionalities. On the contrary, networks are a very appropriate governance form for the public and nonprofit sector that can work, provided that the network can be a flexible instrument. Avoiding the fact that networks in the public and nonprofit sector fall into traditional bureaucratic structures and avoiding hierarchy in the network are important considerations for network managers. However, this does not mean that networks are always the preferred form as long as the networks are flexible. It is still a form that requires trust, which is not easily established. Advice can be given to public administrators not to urge for too much control and stability but allow the

network to be a flexible instrument. This is especially important when the networks are vertical involving several government layers. Furthermore, although many question whether effectiveness can and should be assessed in networks; establishing and trying to reach effectiveness criteria can have a positive effect on the working of the network. The same goes for positive power in the form of constructive influencing allowing the network to move on and take action. Trust is manageable, especially cognition-based trust, and flexibility in the network en network effectiveness seem to be tools that can be used to improve the working of the network.

By taking a public management perspective on networks, the article adds further to the development of a public management theory of networks. Not all public and nonprofit sector characteristics seem to matter but several do, such as the vertical character or the tendency towards control and stability. Our study also adds to network theory and public management literature because it could add empirical results to the mainly theoretical work in the field. The relationships between flexibility and trust, effectiveness and trust, and between power and trust, clearly generated interesting findings that are unexplored both in theory and empirical research; and that can further advance network theory. Although trust is often studied, and many studies recognize the central role of trust, trust is rarely used as an outcome variable. Moreover, our study proves the necessity to distinguish between affect-based trust and cognition-based trust.

Furthermore, it sheds some light on new organizational forms. Although networks have many benefits and have potential, also in sectors that seem to be less favorable for network development, network's main benefits are in its flexibility, making it a unstable organizational form.

Further study should therefore focus more on flexibility and power in networks. Power especially deserves a more detailed study because of the many facets of this concept.

Literature indicated the importance of managing networks and we can also add here the importance of managing trust in networks. Furthermore, a longitudinal approach would allow more insight into how trust is developed and evolves in the networks. Additionally, we might control for interpersonal trust and personal value patterns that might interfere with the development of organizational level trust and values, because networks often tend to rely on a few key people having personal values, trust relationships, and a trust history with people in the network. Of course, including the personal level would lead to a three-level study (person, organization, and network) and would make empirical study even more challenging.

Limitations

Data from the interviews taught us that networks were having difficulty in motivating partners, building trust, defining goals, reaching goals, finding ways to judge on the working of the network, and gaining legitimacy. The networks were not without burdens. Apart from the negative impact of vertical networks, no other causes of low trust were found, indicating that a number of other variables that were not measured might be important.

The study included a number of variables that could be considered as "rough." This is especially the case for power, network type, and values. Agranoff and McGuire (2001) mention, for instance, a distinction between "power to" and "power over," that could be useful in further research. Network type represents a number of management characteristics, such as decision-making, coordination, and level of centralization. These are all different aspects that might require more detailed study and maybe a moderating effect could only exist for one of these aspects. A separate empirical study on the role of these types might be necessary. Values were limited to a generic set of twenty values while many more exist, and especially many more that are more typical of the sectors studied. Values distances and public values were two very rough measures. On the one hand, the broadly defined and measured concepts might result in fewer significant relationships. However, on the other hand,

narrowing the concepts and the measurement of these would mean making these more context specific or specific for certain types of networks or certain specific sectors and would make these less suitable for measurement in our diverse sample.

Several authors mentioned the lack of empirical research on whole networks due to the difficulty of collecting data on the network level and obtaining a sufficiently large sample (Provan, et al., 2007; Raab & Kenis, 2009). Our study was an attempt to fill this gap, but our study also suffered from sampling limitations. There is a lack of sampling frame and the sample size on the network level is still rather low, resulting in low power (Lake, 2006). This is especially a problem for studying the interacting role of network types. Hence, the lack of findings on the role of these types does not question the importance and potential role of these types.

We also collected a broad range of different networks in terms of size, age, and activities. Further research could focus more on a particular context, sub-sector or type of network but this would make reaching sufficient sample size even more problematic. Our dependent variable, trust, is non static while our study is cross-sectional. Clearly a longitudinal approach to see how trust evolves in a large sample of networks is an evident avenue for further research. A qualitative case study approach studying the variables in a small number of whole networks might have avoided many of the mentioned limitations. However, notwithstanding the limitations and the fact that quantitative hypotheses testing research might be extremely challenging in the study of whole networks, we believe that such attempts should be made to advance the field of network theory and public management research. Moreover, only a quantitative hypotheses testing approach allows to investigate among a diverse range of public and nonprofit networks whether pushing extensive use of networks in this sector is a blessing for this public and nonprofit sector.

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TABLE 1

Descriptive Statistics and Cross-Level Correlations

Variable	Mean	s.d.	1	2	3	4	5	7	14	15
Organization-Level 1										
1. affect-based trust	3.70	0.57	(0.72)							
2. cognition-based trust	3.89	0.52	0.49**	(0.78)						
3. flexibility	3.25	0.67	0.35**	0.37**	(0.82)					
4. power	2.59	0.64	0.34*	0.11	0.12	(0.79)				
5. values distance	0.94	0.12	0.06	0.05	0.05	0.06				
6. public values [b]	-	-	-0.06	-0.05	-0.02	0.03	0.07			
Network-Level 2										
7. network effectiveness	3.97	0.41	0.19	0.29*	0.22	0.09	-0.01	(0.74)		
8. vertical network [b]	-	-	-0.15	0.00	0.12	-0.11	-0.08	0.01		
9. mandatory network [b]	-	-	-0.01	-0.04	0.03	0.02	-0.12	-0.05		
10. public-private partnership [b]	-	-	0.03	0.08	0.07	-0.06	-0.05	0.12		
11. NAO [b]	-	-	-0.14	-0.12	-0.04	-0.13	0.02	-0.04		
12. shared governance [b]	-	-	0.15	0.14	0.15	0.06	-0.03	0.10		
13. lead organization [b]	-	-	-0.03	-0.05	-0.15	0.07	0.01	-0.08		
Control										
14. size [a]	3.21	21.60	-0.20	-0.18	0.03	-0.21	-0.14	-0.12		
15. age [a]	5.42	22.38	-0.06	0.01	-0.03	-0.06	-0.01	0.06	0.01	
16. health care sector [b]	-	-	-0.01	0.03	0.14	-0.02	-0.10	0.16	-0.01	-0.30*

*significant at p<.05; **significant at p<.01; [a] variables size and age are centered on the median; [b] these variables are dichotomous variables, only correlations between the dichotomous and interval variables are displayed

TABLE 2
Results for HLM analysis of affect-based trust and cognition-base trust

Variables	Parameter Estimates					
	affect-based trust			cognition-based trust		
	b	s.e.	t	b	s.e.	t
Network-level hypotheses - Level 2						
mandatory network	0.00	0.84	0.01	-0.05	0.07	-0.71
vertical network	-0.25	0.08	-2.93**	0.07	0.08	0.78
network effectiveness	0.02	0.08	0.22	0.21	0.07	2.87**
NAO x vertical network	-0.07	0.17	-0.42	0.05	0.14	0.32
NAO x public-private partnership	0.10	0.17	0.60	-0.16	0.14	-1.19
shared x mandatory	-0.05	0.85	-0.55	-0.01	0.08	-0.13
Organization-level hypotheses - Level 1						
public values	-0.06	0.06	-1.05	0.07	0.05	1.32
values distances	-0.04	0.20	-0.18	0.05	0.19	0.28
public private partnership x values distances	0.05	0.10	0.46	0.00	0.08	0.04
flexibility	0.20	0.04	4.71**	0.15	0.04	3.55**
power	0.21	0.04	5.21**	-0.06	0.04	-1.50
lead x values distances	-0.06	0.10	-0.61	-0.01	0.10	-0.14
NAO x values distances	-0.10	0.08	-1.22	-0.08	0.08	-1.00
shared x public values	0.03	0.08	0.39	0.11	0.07	1.59
NAO x power	-0.01	0.03	-0.42	-0.02	0.03	-0.88
NAO x flexibility	0.00	0.02	0.08	-0.01	0.02	-0.33
lead x flexibility	-0.03	0.03	-1.03	-0.01	0.03	-0.23
Control						
size [a]	-0.01	0.00	-2.61*	-0.00	0.00	-1.64
age [a]	-0.00	0.00	-0.29	0.00	0.0	0.70
health care sector	0.09	0.10	0.84	0.14	0.086	1.60
cognition-based trust	0.49	0.05	9.73**			
affect-based trust				0.44	0.04	10.11**

Level 1 n= 359; level 2 n=54; *significant at p<.05; **significant at p<.01; [a] variables size and age are centered on the median

FIGURE 1

Relationships between characteristics of public and nonprofit networks and trust

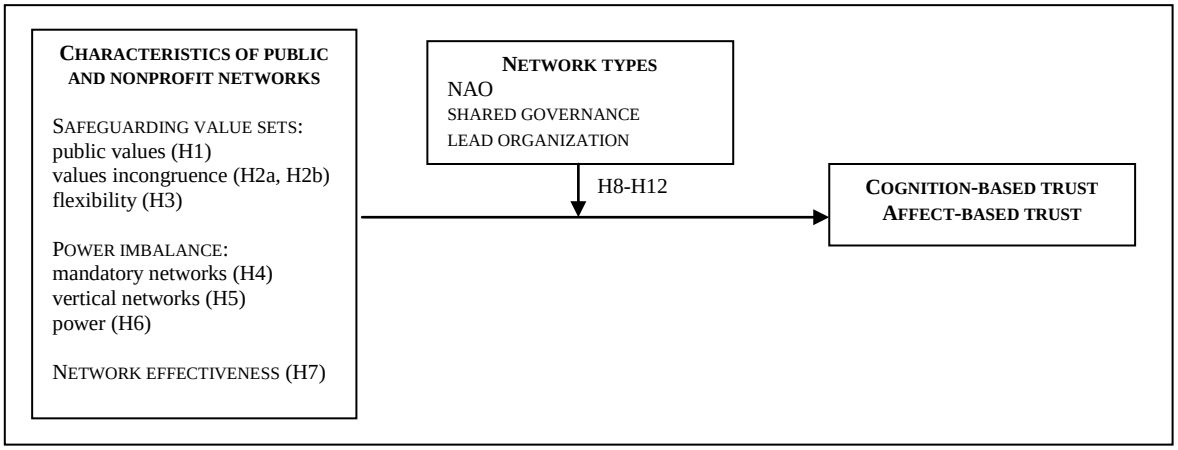

FIGURE 2

Confirmed hypotheses on the relationships between characteristics of public and nonprofit networks and trust