Article

Back to the Future: Using Organization Design Theory for Effective Organizational Networks

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Abstract

In this article, we explore how classical organization theory can contribute to better comprehend the phenomenon “organizational networks.” We will demonstrate that this juxtaposition can produce new and interesting insights. First, we argue that an organizational network can be understood as an organization following the classical definition by March and Simon. Second, we assume that organizational networks, as any other form of organizing, need to find solutions to four universal problems as suggested by Puranam and colleagues to be effective: task division, task allocation, reward provision, and information provision. Third, introducing and analyzing an existing organizational network for the management of housing expenses in a Dutch municipality helps us to reflect on how organizational networks in general and this network in particular have found solutions to the four problems of organizing. Finally, we present a number of interesting observations and implications resulting from the confrontation between organizational networks and organization theory and formulate a number of propositions to inspire and guide further research.

Introduction: The Discovery and Study of Organizational Networks

There is little doubt about the fact that organizational networks have received increasing attention in the last two decades. The concept has not only been prevalent in academia but also in practice. Organizational networks are often seen as a new way to get things done. In many instances outcomes cannot be realized by an individual organization, because the task is complex (in contrast to simple or complicated tasks) and/or when tailor-made services are demanded. In both cases, inputs from different organizations need to uniquely be (re) combined to successfully tackle the problem or provide the service (Raab and Kenis 2009). The prevalence of organizational networks can be observed across many different fields such as product and service innovation, provision of health care, agriculture, housing, mobility, fighting poverty, sustainability, tourism, education, welfare, and so on.

The concept of the network society is already familiar since the mid-nineties (especially Castells 1996). The attention for organizational networks, the society of networks (Raab and Kenis 2009) in general and goal-directed networks in particular (Provan, Fish, and Sydow 2007) became popular more recently and it is therefore not surprising that at that stage a large part of the literature on organizational networks was descriptive. Scholars concentrated on defining the new phenomenon and argued that goal directed or “whole networks” (Provan, Fish, and Sydow 2007) are different from other phenomena—such as the market and hierarchy (Powell 1990) or serendipitous...
networks (Kilduff and Tsai 2003). A large number of case studies have been published demonstrating the existence and the potential of goal-directed organizational networks as a new instrument of organizing in public policy. These case studies often pointed to a number of success factors of organizational networks leading to a substantial list of factors, which allegedly play a role in the effectiveness of goal-directed organizational networks.

Given the accumulation of these factors, some scholars bravely attempted to integrate them in conceptual frameworks or models to further advance research and theory building. The idea being that other scholars might attempt to validate them empirically, refine them or study their generalizability. Examples of such frameworks are for example Turrini et al. (2010), Popp et al. (2014), Bryson, Crosby, and Stone (2015), Planko et al. (2017), Ansell and Gash (2008), or Parent and Harvey (2009). All these frameworks try to bring together a multitude of factors influencing network outcomes under broad categories like network or collaboration structure/characteristics, governance, network or collaboration processes, goals, attributes of network participants, characteristics of the relationships/partnerships, and contextual characteristics. Inspired by the call of the Arizona Organization Theory and Public Management Workshop in November 2018 to include more organization theory in our attempt to understand public management, we however would like to propose another route for deepening our insight in the functioning and effectiveness of organizational networks. Rather than developing yet another model or adding new factors to existing frameworks we propose to study the extent to which available organization theory, more specifically organization design theory, can be instrumental in the study of organizational networks. We do not deny that the models mentioned above have their merit (as can be seen from the many citations they receive in the literature) but we think going back to existing organization theory can provide different perspectives on organizational networks that were a bit forgotten and can help us to better understand and ultimately manage them. Thus, we will explore how classic organization theory can contribute to better comprehend the phenomenon and vice versa what organization theory can learn from the study of goal-directed networks as a new way of organizing.

We will develop the following line of argument: first, for organization theory to be appropriate in studying organizational networks we have to make the claim that organizational networks can be considered as organizations or at least as a specific way of organizing. Second, we will introduce organization design theory as a theory capable of analyzing organizational networks. Thirdly, we will introduce an empirical case (the organizational network Housing Expenses in a medium sized Dutch municipality, or HENW for short) which helps to study the appropriateness, advantage, and limits of applying the particular organization design theory. Fourth, we will introduce specificities of the organization theory by arguing whether we observe particularities in applying it to organizational networks (rather than to more classical organizations, for which it was initially developed). Fifth, we will investigate to what extent and how it enriches our understanding of the empirical case. In a concluding section, we address the advantages, limitations, and challenges in applying organization theory to the study of organizational networks.

**Organizational Networks as Organizations**

In considering applying organization theory to the study of organizational networks, a pertinent question is whether organizational networks can actually be seen as organizations. The organizational phenomena has evolved substantially since the foundational theories of organization design with Max Weber’s seminal work on the bureaucratic organization. Our theories of organization design have evolved since then but they still have a strong intrafirm focus and continue emphasizing elements like “formal authority (embodied in contractually specified employer–employee relationships), the design of incentives like salary, bonuses, benefits, and promotion opportunities, and the collocation of individuals performing highly interdependent activities” (Gulati, Puranam, and Tushman 2012). Before applying organization theory to organizational networks the question is then, to what extent we can consider organizational networks as organizations.

To address this question we apply the definition of an organization as originally offered by March and Simon:

> Organizations are systems of coordinated action among individuals and groups whose preferences, information, interests or knowledge differ. Organization theories describe the delicate conversion of conflict into cooperation, the mobilization of resources and the coordination of effort that facilitate the joint survival of an organization and its members. (March and Simon 1958: 2)

With the exception that the definition addresses the coordination among individuals and groups (and not among organizations as in organizational networks) this definition easily covers the phenomenon of organizational networks. The definition as proposed by March and Simon dates back more than half a century...
but still addresses the essence of what organized action is about. In contrast to what is often perceived as an organization—a well-structured functional system—this definition nevertheless reflects well what organizational networks are about: systems of coordinated action among (in the case of organizational networks) organizations but also groups and individuals who differ on multiple dimensions and where conflict is converted into cooperation and where the mobilization of resources and the coordination of effort is key for achieving the network goals and make the network sustainable.

A goal-directed organizational network thus clearly complies with the essential elements of what is widely accepted as an organization (Puranam, Alexy, and Reitzig 2014): (1) it is a multi-agent system; (2) it has identifiable boundaries; (3) it has system-level goals; and (4) its constituent agent’s efforts are expected to make a contribution.

Rather than studying which organization theory is most appropriate for describing the delicate conversion of conflict into cooperation, the mobilization of resources and the coordination in the present article, we will show how organization theory can contribute to the analysis of organization networks using one specific theory, that is, organization design theory. Organization design theory starts from the premise that organization design is a major factor in determining an organization’s performance by specifying and regulating how people (or teams or organizations) work together in these organizations (or organizational networks) (Burton and Obel 2018; for a previous application of organization design theory on interorganizational relations, see Gulati, Puranam, and Tushman 2012).

Introducing the Organization Design Perspective to Study the Functioning of Organizational Networks

In the following, we will use an organization design theory approach which postulates that agents who make up human organizations have limited capacity for accessing and processing information (the bounded rationality assumption), and must be compensated for their efforts (the self-interest assumption). However, compensation of effort does not necessarily need to take on only monetary or even material forms (Simon 1947). Starting from these assumptions and based on the work of organization design scholars (Burton and Obel 1984; Lawrence and Lorsch 1967; March and Simon 1958; Mintzberg 1993), Puranam (2018) states that functioning organizations must solve two fundamental and interlinked problems: the division of labor and the integration of effort. Moreover, he argues that these problems can be further decomposed into four universal problems for any form of effective organizing: (1a) task division and (1b) task allocation as dimensions of “division of labor” and (2a) reward provision and (2b) information provision as dimensions of the “integration of effort.”

Rather than looking for the absence or presence of specific attributes of organizations this approach focuses on organizing as a problem solving process (figure 1).

1. **Division of labor** refers to the breakdown of an organization’s goals into tasks (task division) and the allocation of these task to subunits (individuals, teams, departments, etc.) within the organization (task allocation):

   1a. **Task division** refers to the practice of translating and dividing the goals of an organization into tasks, jobs, or assignments. Within large organizations, subtasks are often distributed to functional areas, such as operations, finance, production, or marketing. In an early discussion on the design of modern organizations, Gulick and Urwick (1937) state that task division can be done on the basis of object, function, type of client, or geographical area. If we consider the work of building a factory, we can divide the work into different tasks (such as designing the factory, arranging investment for building it, procuring raw materials, etc.) with deadlines to finish each task so that subsequent dependent tasks can proceed to meet the overall deadline for the project. Whether goals of organizations are well understood or not and whether they are simple or complex might lead to different forms of task division but does not question the necessity of the existence of task division as such.

   1b. **Task allocation** is about mapping tasks as a result of the task division to agents or groups. It is about who conducts which of the specified tasks in the process of task division. In the above mentioned factory example, tasks are then given to their functional areas of the organization.

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| Functional differentiation or integration of labor (1) | Functional Integration or integration of effort (2) |
|-------------------------------------------------------|---------------------------------------------------|
| (1a) Task division | (2a) Reward provision |
| (1b) Task allocation | (2b) Information provision |

Source: Based on Puranam, 2018

**Figure 1.** The Four Essential Problems of Organizing. Source: Based on Puranam (2018).
To what extent and how goal-directed organizational study new forms of organizing (Puranam et al. 2014).

organization responsible for building the factory, such as finance department which will arrange money flow and the architects and engineers which will produce drawings. Workflow diagrams, business process mapping, value chains, and so on are instruments for both designing task division and determining task allocation.

2. **Integration of effort** refers to solving cooperation and coordination problems. Solving cooperation problems is done through providing the necessary motivation (reward provision) whereas coordination is done through providing information (information provision).

2a. **Reward provision** is about mapping rewards (of any type) to those in the organization to motivate them to conduct the task they have been assigned to. Any organization will contain intrinsic or extrinsic incentives to be part of the organization and to contribute to the tasks of the organization.

2b. **Information provision** is about the information an organization’s agents need to perform their tasks and coordinate their work with others. Information need can be reduced through technology as in an assembly line or through the division of labor. Partitioning of tasks and instruments like schedules or plans can decrease the need for information as a basis to take decisions. Alternatively, channels of communication can be designed by establishing face-to-face communication or through distant communication channels through electronic communication, for example.

Some readers might find such a relatively simple framework trivial. However, it provides a specific lens through which to explore organizational networks. For example, the current literature on organizational networks has very little to say about the type and function of rewards we encounter in organizational networks. In addition, equipped with the specification of the four dimensions of the problem space we can observe how these problems are solved dependent on contingencies, such as developmental stage, characteristics of the initiators and architects of the organization, the relational structure among the participants, and the influence of contextual parameters. We thus have a concrete, but at the same time open framework, which on the one hand allows us to distinguish very different ways to get things done collectively, but on the other hand also enables us to compare deep structural similarities between disparate organizations. The framework is therefore equally applicable to the “traditional organization” but can at the same time be applied to study new forms of organizing (Puranam et al. 2014). To what extent and how goal-directed organizational networks solve these four universal problems will be discussed in the remainder of this article.

**How Do Organizational Networks Solve the Four Universal Problems of Organizing?**

At this point, we do not present a comprehensive review of whether and how the existing literature on organizational networks has addressed these issues but we present a reflection about the possible particularities of these problems in organizational networks. Moreover, we will present a specific empirical case to study how this theoretical framework can be used to assess the functioning of organizational networks and in our final section present propositions about how organizational networks solve these problems and discuss the advantages, limitations, and challenges in applying this framework.

The case we use here is an organizational network in a city of about 150,000 inhabitants in the Netherlands. In 2012, it was reported that the proportion of people living in apartments provided by social housing associations whose housing expenses are financially unsustainable, would increase sharply by 2018 by 9% points to 37%. Unsustainable is defined as having to structurally spend more than 30% of the net-income on housing expenses (including rent, service costs, gas/water/electricity, living related insurances). The effect of unsustainable housing expenses is that many of these persons or families will find it difficult to pay their bills with a possible effect of missing services, such as health care or education, losing their apartment, and so on. One of the social housing associations realized that they themselves could hardly do something about this situation on their own but wanted to avoid a situation where they had to evict an increasingly large number of persons or families. Together with four other organizations, they took the initiative to set up an organizational network to start addressing the problem of the likely increasing number of people in a situation with too high housing expenses. Subsequently, between 2013 and 2018 an organizational network developed in which more than 40 organizations were linked to contribute to the network goal of preventing people in social housing getting into financial difficulties to an extent that they could no longer shoulder their housing expenses and would need support to manage the negative impacts of such a situation. This network was evaluated in 2018. It turned out that the percentage of the residents with unsustainable housing costs projected at 37% in 2012 was reported to be 28% in 2018.

In the context of this evaluation we studied how the organizational network has been developing and how actors have been collaborating in the last 5 years. We further investigated what (in)formal roles they
occupied. We determined the network boundaries through a realistic perspective, which resulted in a list of 67 organizations/organizational entities. We developed an electronic questionnaire with questions about goals, tasks, relations, rewards, motives, interest, and perceived own influence. Data collection was done through an electronic questionnaire and by conducting 11 expert interviews.

In this article, we will use the data collected to get insights on how HENW solved the four universal problems of organizing. The main interest is not the case itself but rather the applicability and added value of the organization design theory in studying organizational networks and what more general insights we can draw for how goal-directed organizational networks solve these four problems.

1a. Task Division
Task division is about the specification of the subtasks to achieve the attainment of the goal. The assumption is that to achieve an overarching goal, subgoals have to be accomplished. It is clear that this also applies to the case of organizational networks. Organizational networks are actually defined as “groups of three or more legally autonomous organizations that work together to achieve not only their own goals but also a collective goal” (Provan and Kenis 2008: 231). Thus, the definition itself is based on the idea that different tasks are brought to the table since the goal of the organizational network can otherwise not be accomplished. But the question becomes how the task architecture in an organizational network comes about. How are the necessary tasks, such as the provision of information, resources, or actions such as referral, etc. determined and how are they derived from the overarching network goal(s)? In an individual organization this can be done through a rather detailed specification by management, by a high-level number of strategic tasks with project leaders specifying more specific tasks, by a centralized division of tasks, etc. What do we in turn know about the specification of tasks in organizational networks? We know that the task composition of the network is important and has consequences for achieving the network level goals. If an organizational network with the goal to decrease the number of school dropouts only contains tasks related to education and not to welfare and other contextual factors influencing students’ lives, the chances of the network being successful decreases. If on the other hand a network contains too many tasks, the chances of the network being successful decreases. It is clear that this also applies to the case itself but rather the applicability and added value of the organization design theory in studying organizational networks and what more general insights we can draw for how goal-directed organizational networks solve these four problems.

There are some interesting particularities to organizational networks regarding the specification of the subtasks. Firstly, goal-directed organizational networks might be generally understood but often different elements appear as important while starting to work on achieving the goal. This is not unlikely given the fact that organizational networks are the predominant organizational form in dealing with so-called wicked problems (O’Toole 1997). This is, because wicked problems, by definition, have incomplete, contradictory, and changing requirements that are often difficult to recognize (Rittel and Webber 1973). The specification of subtasks is thus more likely done in a process that occurs over time than through the design of an ex ante determined architecture. Secondly, given the fact that most of the time existing organizations are involved in initiating organizational networks the effect may be that the network goal is approached from a task/competency supply perspective. The consequence being that tasks which might be necessary to achieve (from a demand perspective) might not easily be recognized given the absence of organizational actors providing these tasks. Similar to the garbage can model of organizational decision making (Cohen, March, and Olsen 1972), solutions might be in search of problems. For example, in a network trying to alleviate poverty, tasks of mental health care services might be allocated to organizations providing these even though mental health issues might not be involved in specific cases. An approach especially undesirable for coping with wicked problems. An example for a demand perspective would be, if in the same poverty network, a careful analysis by a case coordination team would show which tasks are necessary and then subsequently organizations would be approached and included in the network.

There is much more attention to task integration than to task division in the literature on organizational networks. This might be due to the fact that the development of the organizational network research is somewhat linked to network analysis in which we traditionally concentrate on the boundaries of the network in terms of actors and the absence and presence of links rather than looking at the presence and absence of tasks. Thirdly, given the fact that the tasks are performed by independent organizations making sure that these tasks are delivered is far from straightforward. Therefore, existing literature on organizational networks often mentions “partner motives and partner complimentary fit” as an important initial condition rather than the fit of a task with the network level goal.

In HENW case, we specifically asked the question how the task division was determined. As the network was initiated in 2012 by four organizations who...
realized that there was a need to prevent people in social housing from getting into a situation of unsustainable housing expenses or help them get out of this situation. These four organizations produced a written agreement. This agreement specified explicitly a call to all organizations active in the municipality to bring in their competencies to contribute to the network level goal. In 2018, a network had developed with a highly differentiated set of goals (ranging from helping to fill out forms, helping to isolate the apartment/house, helping to find means to increase mobility or to find a job, etc.). It is interesting to see how this small and homogenous group based on strong ties grew to a network of almost 40 organizations integrating many essential competencies to create this platform of organizations which is able to provide specialized and tailor-made services to citizens with unsustainable housing expenses. In this part, we were specifically looking at how subtasks were specified and made the following observations:

First, the founding persons started with an open mind. Although they themselves had a rather specific background (building and servicing housing and public servants), they were very open to linking all kinds of different competencies to their network and to integrating the evolving tasks stemming from very different sectors (economy, health, education, transportation, work, etc.). Second, important for recruiting tasks was that the initial core group of organizations regularly organized municipality-wide events to make organizations curious about the initiative and how they could link the tasks they perform to the initiative. Finally, an important mechanism for the specification of the subtasks was that the initiative was, right from the beginning, very case driven. Rather than building general processes, structures or an overall organizational architecture, the early organizational network immediately started to work on specific cases of vulnerable tenants.

Based on the insight from these cases, the necessity for additional tasks as part of the solution became clear over time. For example, the fact that some of the tenants where stuck in their situation because they had no means to pay for transport became only clear after they dealt with a specific case. In conclusion, the composition of the subtasks in organizational networks is very often not the result of a predesigned system architecture but rather the result of an organic process in which the open mindedness, focus on the network level goal and case orientation are important factors.

1 This strategy resembles “Backward Mapping” suggested by Elmore, which implies starting at a specific problem/case in the implementation process to mitigate the problem that “standardized solutions, developed at great distance from the problem, are notoriously unreliable” (Elmore 1979:610); we thank Brint Milward for pointing this out to us.

1b. Task Allocation

Seen from the organization theory perspective used here, organizational networks also need to develop solutions to the problem of task allocation. The question is how decisions come about regarding who fulfills the tasks, on what basis and how the fulfillment of the tasks is coordinated and monitored. In individual organizations, tasks are distributed on the basis of the skills or competences of the actors and the fulfillment of these tasks follows predefined processes ranging from production chains, being part of predefined teams or self-selection by the partners themselves on the basis of skills and or preferences.

In organizational networks, solutions to the problem of task allocation appear, on the one hand, simpler, but on the other hand, are more complicated. Simpler because the solutions for task division and task allocation seem to overlap. Once a task (and its associated actor) is part of the organizational network, it is rather obvious that this actor will fulfill that task. At the same time, one might argue that the fact that task division and task allocation are closely linked in organizational networks makes things more complicated mainly for, at least, two reasons. The first being that a network organization is a collective of organizations and not of individuals which makes allocation of a “task” a more complicated issue. The reason being that also in an organizational network a “task” is often allocated to a professional. The professional, in fulfilling her task effectively in an organizational network, is dependent on the organization, and particularly on the management of her organization which participates in the network. Professionals are often confronted with the “two-table problem” (Colosi 1983: 246): they collaborate on one table (fulfilling their task in the context of the organizational network goal) but are dependent on the engagement of their management for participating in the organizational network at the other table. Consequently, the two-table problem has to be taken into account when addressing the problem of task allocation in an organizational network (which is an additional issue when compared with the situation of an individual organization). Secondly, standard task allocation instruments and mechanisms, which we know from individual organizations, like authority, workflow diagrams, business process mapping, value chains, and so on are likely not to work in organizational networks. The problem with these types of solutions is, that they contradict the logic of the sheer existence of organizational networks. An organizational network is an instrument designed for dealing with complex or so-called wicked problems which implies that creating network level outcomes is a result of unique and complex interdependencies between tasks which cannot be captured by ex ante designed structures. The
chain structure which is often proposed is not appropriate for complex problems for two reasons. It violates the law of requisite variety: to deal properly with the diversity, you need to have a repertoire of responses, which is, at least, as nuanced as the problems you face (Ashby 1991). Secondly, any solution devised for task allocation in the context of an organizational network will limit the sovereignty of the person fulfilling the task and therefore the sovereignty of the participating organization to some degree, which negatively influences the effectiveness of that organization.

What kind of solutions did the HENW develop regarding the problem of task allocation? Allocating tasks and subtasks was (as in many networks described in the literature) indeed solved by the fact that task division and task allocation were strongly linked or even overlapped. For example, once the local bus company decided to join the network it was obvious that their task was to provide for the mobility of people who could not afford the transportation costs so they could visit public services and go to job interviews, something which is essential in a difficult financial situation often combined with unemployment. Organizations became thus part of the network for the simple reason that they could contribute to fulfilling a specific task. Consequently, there was no need for an extra mechanism allocating tasks to members of the organizational network. This alignment of task division and task allocation can be vulnerable. When a situation occurs where the effective attainment of the network goal requires that a specific task is fulfilled and for which no organization is available in the network itself or within the wider network environment, it is unlikely that the actors in the network will easily observe or realize the absence of this competence or even the need for such a task. We asked participating organizations in the HENW network whether they could name tasks necessary to improve the achievement of the network goal which are not available within the network. Not even one respondent named such a task/competence. This might be because the network is considered “complete” in terms of task fulfillment. However, we think it is more likely that task allocation follows primarily a supply logic instead of a demand logic. From this perspective, the challenge is to develop a solution to the problem of task allocation which addresses this issue (e.g., Verleye et al. 2017).

The initiators of the HENW developed a solution to the problem of task allocation by not designing an ex ante architecture of coordination. They were aware right from the start about the possible danger this might entail in terms of designing a limited basis for task allocation. Although the initial agreement signed by the four initiators of the network made the goal of the network and the fact that it needed many competencies to achieve this goal very explicit, it did not contain any formal agreements or rules about the coordination, or the task allocation for that matter. During our interviews, respondents reported that the absence of such specifications had a positive effect on the development of the network. Moreover, the founding group consisting of four persons met regularly (every 6 weeks) to keep the overview of the development of the network and reflect about where additional impulses might be necessary. The group has, however, hardly any role in the operational coordination, such as the division of tasks, within the network but the members of the group are often contacted individually by other organizations in the overall network for information, for example, about who does what. Therefore, they developed a brokerage role for the network as a whole when it comes to task division and allocation. As we can see in the graph in figure 2, members of this group play a central role in the network of information exchange. Three of the four persons are linked to organizations in the center; the fourth person is a consultant who facilitates the development of the network.

We see that two of the three organizations play a central role in the network of information exchange but we also see that much information exchange takes place between other organizations in the network. We consider this as some type of indicator for the organization of task division and allocation but this is far from perfect.

Next to brokerage roles, discussion of individual cases plays an important role as another solution to the problem of task division and allocation in networks. Cases of tenants which are dealt with have been an important trigger for the development of the network in terms of inviting organizations to participate to contribute competencies and/or to build relationships with other organizations/competencies. Cases where tenants faced the threat of getting evicted turned out to be important instances for the further development of the formal network in terms of task division and task allocation. This pragmatic approach appears to have been very productive and was actually possible given the fact, as said before, that no structures and rules had been set at the beginning with regard to task division and task allocation and that participating organizations were seen as necessary bringing important competencies for dealing with specific and complex cases to the table.

Another form to determine task division and allocation has been the setting up of joint projects. This was very popular in the HENW where about 40 projects were developed between 2013 and 2018. A few were successful but many were not. It is interesting to interpret this development from the theoretical framework we apply here (the organization design theory).
One could interpret this as a division of labor on the network level. The question is, however, how the projects can be considered as a subtask contributing to the overall goal. This was not always clear and probably one of the reasons why some of these projects lost their dynamics soon after they were launched. On the one hand, setting up these projects might be a reaction of organizations to a rapidly growing network. On the other hand, this might hamper the development of the task division and task allocation on the level of the network. These projects might lead to a balkanization of the overall structure of the network decreasing goal attainment (Mintzberg 1993) and therefore could be problematic since the outcome of the network is supposed to be a differentiated, seamless, and tailor-made offer to a tenant with unsustainable housing expenses.

In conclusion, it is clear that the HENW did not develop formal mechanisms for task division and allocation. This does, however, not imply that such mechanisms were absent. Case orientation and communication about tenants seem to have played an important substitutive role for more standard tools and mechanisms used in traditional organizations. This makes clear that having a relationship or building a relationship is a necessary condition for contributing competences after the allocation of tasks. The development of the projects seems to have played an ambivalent role since on the one hand they fostered relationship building but also introduced additional complexity which made the task allocation not always clearer.

2a. Reward Provision

The third problem, for which each organizational form needs to develop solutions, is reward provision. This is about ensuring rewards (of any type) for those participating in order to motivate them to conduct the tasks they are supposed to fulfill. In the case of organizational networks this is an interesting problem given the absence of the unity of ownership and authority (in the Weberian sense). Organizations most of the time participate voluntarily in these networks and since organizations are concerned about their sovereignty as well as the costs and benefits for participating they can easily Orgexit (like Brexit) in case they are confronted with too much external regulation or coordination. Consequently, we should also pay attention, and
probably even more so, to how rewards (of any type) are provided to those participating in an organizational network and ask the question how they are motivated to conduct the tasks they have been assigned to.

Which solutions to the provision of rewards were developed in HENW? Comparable to task division and task allocation also with regard to reward provision, the organizational network did not develop any provision or mechanisms ex ante. In the initial agreement, no direct reference to reward provision was made except for the fact that the initiating organizations stated that it is important to deal with these societal issues. Given the absence of clear references to reward provision we needed to look for indirect ways to assess why organizations actually have actively participated for several years in the organizational network.

To find out about the motivation of the participants to contribute to the goal, we asked the respondents what the reasons for their organizations are to cooperate in the network. The findings are summarized in Table 1.

Table 1 demonstrates that the respondents report a combination of direct advantages for their own organizations and the willingness to contribute to the solution of broader societal issues. Most of the respondents believe it to be (very) important to find out what the broader context of the issue means for their own organization and they believe that the organization can reach its own goals better and more efficiently by cooperating with others in the network. Organizations seem to be sensitive to the issue that large societal costs can be prevented by the organizational network. At the same time, participation provides them a chance to be visible in the community by engaging in an important issue. Direct financial advantages (such as receiving subsidies) are, somewhat surprisingly, considered less important. What is interesting is that for the reward provisions valued by the organizations to materialize the network needs to be functioning effectively. At the same time, the network is only successful if the participants in the organizational network see the importance of the type of rewards as shown in the table, because there are hardly any external or ex ante rewards for just participating.

Although reward provision is an important element in the functioning of any organizational form it is interesting to see that the network studied did not pay any attention to this issue in a formal way. We nevertheless could observe, however, that the individual organizations felt rewarded to be part of HENW. This might be one of the success factors of this organizational network. It seems to have created a positive spiral of increasing effectiveness of the organizational network and increasing motivation of the individual organizations to participate in the network (Emerson and Nabatchi 2015). We certainly need more research on how such a positive spiral comes about as well as about other types of reward provision hidden in organizational networks such as, for example, reputation building (Kenis and Provan 2006).

2b. Information Provision

Finally, we need to ask the question, which solutions have been developed for the problem of directing the flow of information to perform the tasks and coordinate the work with others. Information flow seems essential in organizational networks where it is key to assure interdependency between activities and measures to deal with complex issues and to provide network level tailor-made solutions and services. Developing schedules or plans as ex ante coordination in order to decrease the need for information as a basis for decision making might be common in single organizations but is not evident for organizational networks. First, and as argued before, such types of structuration might discourage the participation of organizations. Secondly, schedules and plans might be suitable for dealing with issues which can be dealt with in a pooled or sequential manner but not for complex tasks which usually lead to reciprocal task interdependence (Lawrence and Lorsch 1967; Thompson 1967). Other ways to reduce information needs can be done through the division of labor or by designing channels of communication through face-to-face communication or through distant communication channels.

How did the network HENW deal with the issue of information flow? What became clear is that the issue
of having adequate information about cases of vulnerable tenants and the activities of other organizations in the network was mentioned as being very important during the interviews. But again the network or the initial group did not develop any systematic solutions in this respect. The “work” done in the network thrives very much on face-to-face communication. This became already apparent in figure 2 where we presented the overall flow of information in the organizational network. These information flows are the result of face-to-face communication or through telephone or other electronic channels (it turns out that actors in the network easily exchange their mobile phone numbers). In addition, we asked the question whom the organization contacts about problems regarding or connected to housing expenses. The results on this question are plotted in figure 3.

It is interesting to see that this network is rather dense and not highly centralized and that we thus can assume that direct, often face-to-face communication is indeed an important solution to fulfilling information needs.

Although information flow through a decentralized network of bilateral relations is thriving in this organizational network this solution to information flow has also a number of limitations. Firstly, much of what happens in HENW is privacy sensitive information. This clearly inhibits the free flow of information, especially when it comes to problematic cases and thus might inhibit the development of solutions for the tenants. The network studied did not yet develop solutions to this problem. One interesting option which is studied at the moment is to draft a form which tenants sign and in which they can indicate which other organizations are allowed to see the information which has been collected to come up with a rapid solution for the tenant. Secondly, on the basis of qualitative information, there is little indication of the flow of information in multilateral relations. The brokerage position of the initiators of the network might play some role here (especially by facilitating triads/group of three connected actors) as well as the fact that many projects developed within the context of the organizational network (which can be considered multilateral settings). Both, however, do not solve the problem for complex issues where reciprocal relationships between a differentiated set of actors is necessary to address the problem.

In conclusion, it can be said that in HENW information provision is done mainly through a rather dense network of dyadic relationships. This can be adequate in many cases but an aggregate of dyadic relationships has also an important number of limitations when it comes

Figure 3. Advisory Relationships in HENW (“Who do you most probably contact in case you have a question regarding problems related to housing expenses?”)
to privacy, personal professional ties, evaluation of the overall network, and dealing with complex cases. That some people already knew each other from other contexts certainly helped but only explains part of the story.

**Discussion**

We set out to apply classical organization theory and in particular organization design theory to the study of organizational networks. The reason being that a broader organization theory lens can bring us back to central questions and accumulate knowledge about organizational networks as theory and practice about organizational networks can profit from more theorizing (Isett et al. 2011). Since we consider organizational networks as a (new) way to get things done we apply organization design theory to the study of organizational networks. The attractiveness of the theory is that it is parsimonious and has been broadly used and validated in the study of organizing (Puranam 2018). What then are the most important insights for organizational networks for the four universal problems of organizing that we can state for further investigation and testing? As Puranam et al. (2014) argued, new organizational forms are likely to provide new solutions for the universal problems that in case of organizational networks should be able to deal with more intangible rewards, the more informal character of organizing and an attitude of participants which is less oriented towards direct rewards that characterize organizational networks compared with more traditional vertically integrated organizations.

**Task Division and Task Allocation**

Task division does not seem to play a role in the literature on organizational networks and seems, at least on first sight, to have been evaded the attention of scholars. This is astonishing, since division of labor has been a major factor for the enormous productivity gains of modern organizations dating back to Adam Smith’s description of the needle factory. It also has been the focus of scholarly discussions right from the start of organization theory in the 20th century (Gulick and Urwick 1937). Apparently, scholars on organizational networks have not identified division of labor as a major issue. We think this is due to at least four reasons. First, studies on the governance of goal-directed organizational networks have been more concerned with how to integrate diverse, if not disparate and fragmented organizations rather than asking questions about the right type and level of differentiation, that is, task division and task allocation. The problem of integration is seen as much bigger than the issue of differentiation. Second, most practitioners seem to feel that they have to tackle complex problems with the organizations that are available. Since these problems cannot be solved by a single organization alone, not even a new one, network formation starts from the supply side rather than from the demand side and task division happens on the basis of the available competencies. We deem this to be a rational strategy as long as there is not a “right” for organizations to participate in a network but a decision process on the basis of required and available resources. The third reason has to do with the character of networks as being more informal or “lighter on their feet” (Powell 1990) than hierarchies. An ex ante task division would require formalizing the network to a degree that might be detrimental to the overall purpose and introduce counterproductive rigidities. The fourth reason is linked to the nature of the problem. Complex social issues or even wicked problems are characterized by high uncertainty, complexity, and value divergence (Head and Alford 2015) or as Rittel and Webber (1973) originally argued wicked problems “do not have a definitive formulation of a problem” nor is there a “well described set of permissible set of operations that may be incorporated into a plan.” In Perrow’s (1967) terms, organizational networks are likely to deal with nonroutine tasks that are difficult to analyze and know many exceptions. Given that complexity, it seems almost futile to think of an ex ante designed task division. Rather, it seems more rational and effective to develop the task division incrementally over time based on actual cases that the network tries to solve.

However, despite this general tendency and insight, quite a few networks are formed with a specific governance mode: the shared governance, the lead organization mode, or a network with a network administrative organization (NAO) (Provan and Kenis 2008). Similar to what Puranam et al. (2014) observe for example in case of software development, when deciding on a governance mode, networks determine an initial task division (and allocation) on the macro level of the governance mode. Puranam et al. (2014) call this the “layer 1 architecture.” In case of organizational networks, dealing with complex societal issues, this is likely to happen collectively between the original set of actors, who take the initiative and are determining the network goals. This brings us to our first propositions.

**Proposition 1a:** Task division in organizational networks on the macro level is likely to happen collectively in the initial formation phase by designing a layer 1 architecture through the adoption of a network governance mode.

**Proposition 1b:** A case driven task division for the operational level will be more effective than an ex ante designed task division.
Many networks start through professionals from different organizations getting together, because they realize that they can only jointly tackle a certain issue or problem successfully. In many cases, the initial governance mode adopted is therefore the shared governance mode, where participants jointly govern the network both with regard to policy and operational questions. In another scenario, the network starts with a shared governance mode more unconsciously as a default mode. Participants might then in later stages realize that the network needs a more formal structure to determine the task distribution and allocation based on the experiences or because the size of the network has increased. In addition, research has shown that for vulnerable populations, for example, stability is a necessary but not sufficient condition for networks to be effective which requires a more formally and (often times) more centralized network (Provan and Milward 1995) in form of a lead organization or NAO model, which leads to a more formalized task division (and allocation). Until then, task allocation will happen more organically by self-selection of network participants driven by the needs of individual cases. We therefore state:

**Proposition 2:** If there is no conscious design choice in the formation phase or a shared governance mode, task allocation will happen more organically by self-selection and self-allocation of network participants driven by the needs of individual cases or specific projects.

As we have seen from the previous discussion, in case of organizational networks, task division and task allocation often go hand in hand, since task division and task allocation are merged in the same actors and driven by self-selection and self-allocation. We therefore state:

**Proposition 3:** Task division and task allocation will strongly overlap in organizational networks.

**Reward Provision**

Similar to the task division, reward provision has also not received a lot of attention in the discussion on organizational networks, at least not in public management. As we might expect, this is very different from studies on organizational networks in business administration and management, that is, alliances, joint ventures, or eco systems, where value creation and value capture play a major role (Dyer, Singh, and Hesterly 2018) and knowledge spillovers outside the collaboration and how to prevent it, has attracted a lot of attention. Despite new public management with a strong focus on organizational efficiency and organizational accountability and outcomes, (semi-) public organizations still care a lot about the common good. In fact, the lively discussion on public value (Moore 1995) and public value governance (Bryson, Crosby, and Bloomberg 2014) signals that contributing to the effective tackling of societal problems and the betterment of society still seems a strong intrinsic motive for people and organizations in the public sector as we also could see in the HENW. Unlike for-profit organizations, which need to capture the value, which their activities create to be sustainable, public organizations see it as a reward if they contribute to the achievement of collective goals. Value creation therefore is deemed more important than value capture. In addition, by participating in organizational networks dealing with complex social issues, public and nonprofit organizations can signal that they contribute to the common good, gain visibility within the community and retain their access to information. The dominant characteristic for actors in organizational networks in the public sector therefore is not transactional exchanges but the pooling of resources to achieve joint goals and gain reputation in the field (Powell 1990; Raab 2004, 327). This holds at least as long as the network activities are seen as contributing to the core mission of the organization or as long as the costs of the activities do not negatively influence the core mission. In fact, one could even argue that organizational networks dealing with complex social issues, which build the commitment of participants on transactional thinking, will fail, because rewards are very much indivisible and will be more intangible than tangible. A more successful strategy for organizational networks in our view is therefore to make intangible rewards more explicit to the participants rather than try to provide tangible rewards and start a race for value capture.

**Proposition 4:** Solutions making intangible rewards explicit to network participants will be more effective than tangible rewards as reward provision for the integration of efforts in organizational networks.

**Information Provision**

Contrary to the first three universal problems of organizing, information flows as the major way to integrate participants’ efforts have been at the center of attention of both scholars and practitioners dealing with organizational networks. One of the main lessons of the 9/11 commission, for example, was that the information provision was not adequate which prevented the law enforcement agencies from detecting and foiling the plot (National Commission on Terrorist Attacks upon the United States 2004). In research, many studies have analyzed the communication structure within organizational networks as a way to integrate and coordinate the efforts of the individual
organizations and scholars have debated for a long time which type of structures are most effective to achieve certain outcomes under certain conditions (see the reviews by Provan et al. 2007 and Kapucu, Qian, and Khosa 2017).

In their study, Puranam, Alexy, and Reitzig (2014) described IT-based platforms with horizontal information flows as a new solution for the provision of information that allow virtual and mass communication in a very efficient manner. However, the use of IT in organizational networks is still at a very early stage and we do not know of any organizational networks where a networked platform would directly connect the IT systems of the different organizations to allow for seamless information flows. This situation is due to technical, legal (privacy), and security reasons, which are unlikely to be solved anytime soon. Information provision in organizational networks therefore still happens mostly face to face, via email or phone or occasionally through a separate joint IT platform. The question then is what structure will provide a timely, efficient, and effective information provision. In our view that depends on at least two things: first, on the purpose a network wants to achieve. Research has shown that centralized networks are advantageous for serving vulnerable populations (Provan and Milward 1995; Raab, Mannak, and Cambre 2015) while general information sharing networks are more likely to have a horizontal, more decentralized structure to avoid information overload in critical nodes. Second, the choice of governance mode will also influence the structure of the information flows. While a shared governance mode will likely go with a dense horizontal structure, a lead organization model will be more centralized while a NAO will be more in between for example in addition to a core–periphery structure. Moreover, if no governance form is introduced as in the case presented above, it is most likely that a core–periphery structure will evolve. We believe this also to be the most advantageous in terms of effective and efficient information provision, where the core of committed organizations frequently exchanges information and stays in contact with organizations connected to their functions that are less involved.

Proposition 5: The most effective and efficient structure in terms of information provision depends on the network goals and network governance mode. In case of broader goals and an unclear mode of governance, a core–periphery structure (eventually supplemented by an NAO) will be most effective in terms of information provision.

We did not know what to expect from using the general organization design framework to analyze an organizational network. The least we can say is that it produced a number of interesting observations stated in the propositions above and the following implications.

First, applying organization design theory to the study of organizational networks seems to work. The theory addresses issues, which we consider appropriate for the study of this organizational form. It is somewhat surprising that insights from this theory have been hardly used systematically so for the analysis of organizational networks (for an exception, see Gulati, Puranam, and Tushman 2012; in this context, collaborations between firms are at the core of attention and they use the term “meta-organizations” for what we call organizational networks). The reason might be that the development of the study of organizational networks is strongly rooted in a structural rather than in an organization theory perspective.

Second, organization design theory addresses issues which the organizational network literature does not address and vice versa. Generally speaking, one can say that the organizational network literature has a strong focus on solutions to the problem of the integration of effort and especially on the provision of information and much less on solutions to the problem of the division of labor or differentiation. Task division and task allocation seem to be hardly problematized and often even taken for granted as far as we can see. The reason might also be its roots in social network analysis where boundary specification (Laumann, Marsden, and Prensky 1983) has been treated mainly as a methodological problem and where describing patterns of integration became the main issue. At the same time, many of the issues presented in general conceptual frameworks in the organizational networks literature seem not to be relevant from an organization design theory perspective. At this point, however, these are rather general statements and a more thorough study of the literature in future research is warranted to find out where both interact in a fruitful way.

Third, although integration has received the most attention in the study of organizational networks (in terms of trust, alignment, leadership, etc.), the two dimensions of integration as described in organization design theory have not. Reward provision has, as far as we know, not received a lot of attention in the literature on organizational networks. Information provision in the form of information flows are mainly looked at from an ex post perspective of actual information exchanges but not ex ante from an organization design perspective to deal with the reciprocal task interdependencies that arise when dealing with complex social issues. Also this might be explained by the roots of the field where values of
community, closure and public value are considered as important values. On the basis of the case study presented we hope, however, to have convincingly shown that asking the question about how organizational networks solve the problem of reward and information provision can produce important insights in why some organizational networks are much more effective than others.

Fourth, it became clear that we have to find improved measures for studying the solutions to the four problems of organizing for the case of organizational networks. Workflow diagrams, business process mappings, or value chains do not seem to be the type of solutions we can expect to find in organizational networks. In presenting the case study, we implicitly indicated that there are alternative mechanisms and instruments that play a role in organizational networks but we need to find ways to make these more explicit in the future.

Fifth, it might be interesting to see how the solutions developed in organizational networks for the four problems might be applicable to classical organizations. In a world of “The End of Bureaucracy” (Hamel and Zanini 2018), Holacracy (Robertson 2015), the Boundaryless Organization (Ashkenas 1995), more and more organizational structures develop which have similar characteristics to those of organizational networks. Consequently, this literature could profit from what research on organizational networks has discovered as solutions to the four problems. This seems to be a fascinating line for future research. For example, classical organizations today need to cope with a fast and complex environment rather than with standardized situations. To do so, organizations need lots of excess slack, which they can mobilize quickly. Solutions found by organizational networks to do so (i.e., not carrying heavy inventories, but relying on their permeable boundaries) might be an answer.2

The greatest limitation of this study is obviously that the results are based on just one case in one country in one specific social domain. Another limitation stemming from the case study approach is that there was no variation in governance modes. The one presented in the case here resembles a shared lead organization mode, albeit not consciously determined, where a limited number of organizations jointly govern the network with a core–periphery structure. We made inferences for the different governance modes based on the insights in the literature, which admittedly are somewhat speculative. Another limitation is the specific type of network, that is, its voluntary character. Especially reward provision is likely to be different in contractual or mandated networks, which opens an interesting avenue for future comparative research on reward provision in different types of networks.

Conclusion

Organizational networks have received increasing attention in the last 15 years. In a Google Scholar search the concept “organizational networks” appears about 600 times in the single year 2000; more than 2,000 times in the single year 2010 and almost 3,300 times in the single year 2017, and a total of 54,000 times until now. The concept has clearly attracted attention not only in academia but also in practice. Given the discovery of a new phenomenon it is not surprising that initially a large part of the literature has been descriptive. More recent literature has made attempts to build comprehensive conceptual models to better understand the antecedents and consequences of the phenomenon. Rather than refining or producing yet another comprehensive model, we proposed to explore how classical organization theory can contribute to better comprehend this new phenomenon. We demonstrated that this juxtaposition can produce new and interesting insights. First, we argued that an organizational network can be understood as an organization following the classical definition of March and Simon (1958). Secondly, we demonstrated that the four universal problems of organizing: task division and task allocation (division of labor) on the one hand and provision of rewards and information (integration of effort) on the other also occur in organizational networks. However, task division and task allocation strongly overlap and the provision of rewards happens rather implicitly. The discussion of the organizational network literature showed that so far most attention has been paid to the integration of effort in the form of information provision, while the division of labor has not been problematized and the provision of rewards in public sector networks has received very little attention. We formulated five propositions that we hope will provide a basis for the research on organizational networks using organization design theory in the future. Even though we believe that given our knowledge about organizational networks from other research projects and the general literature, the main ideas presented here are generalizable to a whole range of organizational networks, future empirical research has to test the propositions presented here.

2 We thank Joe Galaskiewicz for suggesting this to us in a private conversation.
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