Towards the study of network control

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INTRODUCTION: TOWARDS THE STUDY OF NETWORK CONTROL

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Networks have become extremely important coordination mechanisms for accomplishing individual and collective goals in the public, private, and nonprofit sectors. Networks, consisting of three or more organizations that consciously agree to coordinate and collaborate with one another, deliver goods and services, address problems and opportunities, transmit information, innovate and acquire needed resources. Since the early 1970s, the study of networks has increased exponentially (see e.g., Bradach and Eccles 1989; Powell 1990; Borgatti and Foster 2003; Smith-Doerr and Powell 2005).

Despite this increased attention to networks in the organizational literature, one of the topics that is conspicuously absent is the control of networks. The collective outcomes of networks are of special relevance in public management, where networks consisting of public, private and non-profit organizations produce public goods and services like health care (Milward and Provan 2000) or environmental protection (Schneider, Scholz, Lubell, Midruta, Edwardsen 2003). The same applies to what most of us would consider less desirable network outcomes such as the terror attacks on the United States on September 11, 2001, Spain on March 11, 2004, and Britain on July 7, 2005. Thus attention is also drawn to the fact that many countries around the world have increasingly had to face transnational criminal networks with a global reach in terrorism, weapons, drug smuggling, human trafficking, and nuclear proliferation (Naím 2003).

The "bright" and "dark" networks (Raab and Milward 2003) mentioned above point toward directing attention to the control of networks, control being generally

understood as "... a process of monitoring something, comparing it with some stan-
dard, and then providing selective rewards and adjustments" (Ouchi 1977, 97). Con-
trol thus refers to the question of how we know whether a network is producing
according to some standard and not according to some other standard, thus produc-
ing undesirable outcomes, and following from this, what can one do about eventu-
ally redirecting them. We know how control generally functions in two other forms
of coordination—the market and the firm. In the market it is the price system, and in
the firm authority relationships, which assure monitoring, compliance, and redirec-
tion. If this is how control operates in markets and firms, how does control function
in a network situation? Where do the standards for assessing its functioning come
from, who monitors, and who eventually redirects the network?

Despite the obvious importance of network control, Kenis and Provan report in
this volume that a recent search in one of the leading journal article databases
(1,200,000 records) with the keywords "network and control" produced only 9 hits
in the social sciences. Given the obvious importance of control in networks that pro-
duce public goods and services, why has the control of networks received relatively
little attention in organization studies, public management and political science,
especially if one thinks of the fact that control within and of single organizations
has been one of the major objects of research and discussion in organization studies
and is commonly seen as a core task of management (Kaufman 1960; Selznick 1949)?

First, in the management literature most of the time networks are not seen as pro-
ducing collective goods but are mainly described as instruments for advancing indi-
vidual goals of the participating actors. If the network is not considered a separate
work system or unit of analysis there is no necessity to study the control of networks.

Second, networks generally have a positive connotation. It is often automatically
assumed that networking is something positive by definition—if a health system is
fragmented, the way to fix it is through more collaboration among the network of
health care providers. Although networks producing "collective bads" like the Mafia
have been with us for a long time, the more recently discussed phenomenon of
Islamic terrorist networks has vividly demonstrated the dark side of networks.

Third, control has traditionally been studied in an organizational context, focus-
ing primarily on structural mechanisms including rules, hierarchy, and governing
boards (Mintzberg 1979; Fama and Jensen 1983); personal control through leader-
ship; and external constraints (Pfeffer and Salancik 1978). Networks are, by design,
built around collaboration, and the idea of formal control mechanisms is typically
viewed as inconsistent with the whole point of having a network. Not addressing
the issue of network control is undesirable since some form of control, whether for-
mal or informal/norm-based, is necessary to coordinate network activities and to
ensure that network-level goals, and not just organization-level goals, are achieved.

Fourth, another key reason seems to be that in the literature on network govern-
ance, networks are presented as a solution to the problem of control. The assump-
tion seems to be that "good management" (i.e., leading to satisfaction of the
network participants, win-win situations and some process criteria) is a substitute
for control. In other words, network governance and network management are seen
as forms of self-regulated control.

The fifth reason, which is somewhat connected to the previous, is that those who have studied networks (including ourselves) seem to have been carried away by the idea of networks as self-regulated, horizontal forms of coordination (cf. Kenis and Schneider 1991). They have generally lost sight of the existence of more traditional power and control mechanisms that can complement self-regulation and norms of trust. A similar observation can be made regarding the literature in public administration, especially on topics such as reinventing government public-service reforms and new public management.

A sixth possible reason why the control of networks is seldom discussed is because networks are generally seen as uncontrollable. As Agranoff and McGuire (2001) point out for inter-organizational networks in the public sector, it is "difficult to establish accountability in public management networks." While accountability is always a thorny issue, in the case of networks, tasks are supposedly conducted jointly by participants, and consequently, the problem is that no single organization or individual has responsibility for network-level outcomes, regardless of whether these outcomes are positive or negative.

This special issue of *IPMJ* sets out to raise some of the important questions about the control of legal and illegal networks; it also attempts to structure the discussion of the topic of control and report on some empirical findings and, in addition, formulate an agenda for further research in this area. Contrary to the view that formal control mechanisms are inconsistent with the whole point of having a network, we view control as an essential aspect of networks, even though the defining characteristic of networks is that they don't have a hierarchy of authority.

According to Kenis and Provan (see their contribution in this issue), the following mechanisms to control networks can be identified from the literature in organization theory as well other disciplines, especially economics, political science, and law. Mechanisms of control refer to the different ways control may be exercised. On the basis of the organizational literature, we can divide these mechanisms into four broad categories—personal/centralized control, formal bureaucratic control, output control, and cultural or clan control. In their contribution, Kenis and Provan introduce a fifth category that is specific to networks, which they call reputational control. Personal centralized control denotes the idea of hierarchy. It relates to decisions taken at the center or top level followed by direct personal surveillance of their execution. Formal bureaucratic control, though often exercised complementary with personalized control in organizations, is in fact based on written manuals that attempt to standardize the behavior by clearly prescribing courses of action to be followed. While the first two refer more to the control of the activities or processes themselves, output control refers to the comparison of results with some (previously) defined standards. It closely resembles a market approach to coordination by focusing on outputs rather than on behavior (as the previous two and the following mechanisms do). Clan control as a fourth mechanism of control is based on a system of norms and values to which organizational members conform. They are socialized either by professional norms, originating outside the organization, or by sharing common goals within the organization. Reputational control as the fifth and newly introduced mechanism that is specific to networks implies that that control is

exercised through an understanding of the structural patterns that lead to the building of reputations. In other words, the pattern of reputation throughout the network will act to control behavior, such that those with high reputation will act to maintain their position and those with low reputation will be marginalized.

The collection of papers starts with a contribution by Miguel Pina E. Cunha and Carlos Cabral-Cardoso, which begins with the assumption that in organizational life (including networks) the distinction between legal and illegal is often difficult to determine, because rules are made from a global perspective but might conflict with the local situation. Applying the concept of liminality to the analysis of legality and illegality in organizations, they come to the conclusion that contrary to common practice in organizations, it might be more advantageous for the party involved to openly discuss the conflicts and rely on unobtrusive clan control mechanisms in these situations.

In the second paper, Patrick Kenis and Keith Provan develop an analytical framework for the control of networks. While the issue is also important for networks of private actors, it is crucial for public networks that are supposed to produce collective goods that benefit the public and minimize negative (unintended) consequences. It is also in the public sphere, where questions of legitimacy and accountability are of course most prevalent. In their discussion they conclude that organizations and networks are different regarding how they can be controlled and that the control mechanisms found in the literature on organizations have to be adjusted for use in different types of networks. A second major conclusion they draw is that output control, in their perspective, is hardly an option for controlling networks, because most network settings will have to deal with high environmental uncertainty and complexity, which makes measurement very difficult. As a consequence, they claim, we should focus more on the exploration of alternative ways of controlling the performance of networks.

This suggestion is picked up by Denise van Raaij, who concentrates on the question of how networks control themselves and their performance by studying the norms network members use in this regard. She presents the results of a study of four health care networks in the Netherlands and concludes that three norms are central: the norm of network legitimacy, the norm of activating capacity, and the norm of network climate. These norms are very much linked to the process of how networks come into being and develop and therefore explanations for the performance of networks can be found in the ways networks were initiated and the level of legitimacy they developed.

The contribution of Laurence O'Toole and Kenneth Meier takes a quite different perspective. Their paper deals with effects that might occur if networks are not controlled. They focus on the distributional consequences of legal and legitimate networking operations. After studying the networking activity of principals of 500 schools in Texas through an eight–year period, they conclude that networks and managerial networking can provide considerable benefits, but in the absence of formal control mechanisms can contribute to an increase in inequalities at the expense of ethnic minorities.

The remaining three contributions by Renate Mayntz, Alasdair Roberts, and Brinton Milward and Jörg Raab deal with the control of illegal networks, especially Al Qaeda, after the attacks on Washington and New York in September 2001.

Renate Mayntz analyzes the 567-page report of the 9/11 Commission of the U.S. Congress from an organizational control perspective. In her paper, she tries to identify the organizational, managerial, and cognitive preconditions of successful prevention of terrorist attacks. Her main finding is that if one looks at the possibilities of prevention, accurate threat perception is crucial for effective control, since only by that measure is it possible to filter out and correctly combine the relevant information as well as allocate scarce resources in the most effective way. However, her analysis also points out that hard-to-control factors in the policy environment severely restrict the choice of prevention strategies.

While Renate Mayntz looks at the empirical state of the U.S. security and law enforcement apparatus prior to 9/11 to draw general conclusions about the control of terrorist networks, Alasdair Roberts analyzes the response from the U.S. government, thus the developments within the control apparatus, after the attacks. He argues that U.S. federal policy makers were confronted with challenges that can be regarded as typical of the network form of governance. At the end of his analysis, he concludes that contrary to the worries of many commentators about excessive concentration of power in the U.S. federal executive branch, it might be more accurate to say that the response was typified by a prolonged, and often unsuccessful, effort to induce cooperation and coordination by a wide range of public and private actors.

Milward and Raab, on the other hand, look at the effects massive control efforts of nation states have on illegal networks. By comparing the development and adjustment of a transnational terrorist network (Al Qaeda) and the cocaine trafficking networks in Colombia, on both of which the U.S. had "declared war," they identify crucial factors for the resilience of illegal networks. This in turn is important knowledge for future control efforts. They conclude that control efforts that are directed towards the organizational extinction of those networks will largely fail as long as the central problems behind their existence are not addressed. These problems effectively function as a driving force for the recruitment of new members, reestablishment of linkages, and the adjustment of the organizational forms and processes to the new circumstances. Therefore, with many of these illegal networks, the best liberal democratic nation states can do is develop a strategy to constrain the illegal and covert networks, contain the effects of these networks, and in the long run try to tackle the fundamental problems behind their existence.

It is our hope that this special issue of *IPMJ* will serve as the impetus for organizational and public management scholars to address the problem of control in networks in a serious way. As more and more activities in the public, private, and nonprofit sectors are organized as collaborative networks to produce collective goods and services, the issue of control becomes a critical academic and practical issue. At the same time, as it becomes clear that the advantage of networks for legal purposes is also apparent for illegal purposes, the need to understand control from the perspective of the dark network and how to control it from the perspective of government becomes critical as well. The papers in this special issue will hopefully set the agenda for the research on network control that follows.

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