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## **Managing the Ostrich's dance**

A study on the management of collaborative networks for the  
promotion of policy innovations

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# Chapter 1: Introduction

## **Introducing the Ostrich's dance**

Written by Vidar Stevens

### **ABSTRACT**

This dissertation looks at how civil servants interact with each other in collaborative processes of innovation, and how management influences the interactive dynamics of such collaborations. Based on the similarities between the behaviour of ostriches and civil servants in collaborations, the metaphor of the ostrich's dance is used for the dissertation's title. In the end, the goal is to provide the reader with a well-informed account of how the ostrich's dance of civil servants in collaborations can be properly managed to ensure that *innovative* ideas emerge in multi-actor, collaborative policy-making processes in the public sector.

## Introduction

An ostrich is a large African bird with long legs that runs very quickly but cannot fly. Ostriches are fascinating animals. Not only because of how they look, but also for the way in which they behave. Two sorts of behaviour are particularly interesting. The *first behaviour* is the general reflex of ostriches to respond to a threat. When an ostrich feels scared, it just lies down flat on the ground in the hope that the predator has not seen him or her. From a distance, all that is visible is their large body, leading some people to think that ostriches bury their heads in the sand when they feel danger.

The *second behaviour* which is fascinating is the ostrich's dance. Ostriches dance as a form of courtship behaviour. The male will do a little courtship dance, flapping his wings out, squatting down, and waving his neck back and forth. At this signal, if the female likes what she sees, she will flap her wings backward, while bending her neck forward and making a clapping noise with her beak. This flirting behaviour, eventually, helps ostriches to pick the partner with whom they want to begin a relationship.

During the research for this dissertation, similar forms of behaviour could be observed in civil servants, who acted as representatives of their administrative organizations, in collaborations with other representatives in developing innovative policy solutions for complex policy issues. Some representatives were quite hesitant in engaging with others during these collaborations. They avoided making too many commitments, because they were anxious that this would harm the position of their organizations. Other representatives, however, easily connected with each other. According to respondent 5 of the third case, "with some people it felt as if we were dancing the tango." She used this metaphor to indicate that in interactions with some of the people in the collaboration an exchange of information and new ideas to solve complex policy issues went very smoothly.

The latter 'dancing' behaviour is exactly the kind of behaviour that governments hope for when they establish collaborative networks to develop innovative policy strategies for complex cross-cutting issues, such as immigration, global warming, population ageing, or poverty. Interactions between participants of collaborations will boost innovation in decision-making processes, as more actors and thus more knowledge, information, and experiences are included and exchanged.

This dissertation looks particularly at how representatives interact with each other in these collaborative processes of innovation, and how management influences the interactive dynamics of such collaborations. Based on the similarities between the behaviour of ostriches and civil servants in collaborations, the metaphor of the ostrich's dance is used for the dissertation's title. In the end, the goal is to provide the reader with a well-informed account of how the ostrich's dance of civil servants in collaborations can be properly managed to ensure that *innovative* ideas emerge in collaborative policy-making processes in the public sector.

This introductory chapter proceeds as follows. First, the aim of this study is introduced and some background is provided about the tendency of governments to innovate collaboratively in the public sector. Subsequently, the main concepts of this dissertation are defined, and it is

explained how these concepts relate to each other. Then, the theoretical, methodological, and practical value of this dissertation are discussed. Lastly, the research questions of this dissertation are listed, and the story outline of the dissertation is provided.

## **Collaborative innovation in the public sector**

Many people perceive Silicon Valley as the world's most innovative place. Silicon Valley is an area where many private sector firms (e.g. Apple, Samsung, Tesla, NASA, etc.) have their research and development (R&D) departments. Within these R&D departments employees try to invent new products that will radically alter our way of living. Not many people, however, associate 'innovation' with the public sector (Mulgan and Albury, 2003: 5). Sørensen and Torfing (2012: 2) even argue that a great deal of scepticism exists with regard to the public sector's capacity for innovating public policies, organizations, and services. They specifically write: "many people consider the public sector merely as a slow-moving bureaucracy characterized by red tape, inertia and stalemate."

However, the public sector is much more 'innovative' than its reputation perhaps suggests. If we look back and compare the contemporary public sector to that of 10 to 20 years ago, it is clear that much has changed over recent years. All new sorts of policies have been developed that did not receive any attention previously (Sørensen and Torfing, 2012: 2). For example, new active labour-market policies, preventive health-care, and climate mitigation policies have been developed (idem: 2-3). Moreover, new digitalized services have proliferated, and various reforms have transformed the modus operandi of many public sector organizations (ibidem).

Neither should we forget that politicians routinely find themselves in ritualized situations such as election campaigns, parliamentary addresses and debates, public hearings, press briefings, etc. where they need to demonstrate political leadership by advancing new ideas and calling for innovative policy reforms (Polsby, 1984). In addition, many public managers and employees are driven by professional norms and ambitions to improve services, and respond to new problems and challenges (Vandenabeele, 2007). Lastly, citizens themselves play an active role in stimulating innovation in the public sector by giving critical or constructive feedback on policies and services, either through voting or using citizens' participation processes, such as co-production activities (Brandsen and Pestoff, 2006). Hence, we should not be surprised that the public sector is also subject to ongoing change and reform – and therefore must innovate to keep up with these developments (Borins, 2008).

There are different ways in which governments can 'innovate'. The academic literature mentions administrative process innovations, technological process innovations, product or service innovations, governance innovations, conceptual innovations, and policy innovations (see De Vries, Tummers and Bekkers, 2015: 154; Duijn, 2009: 128). This dissertation specifically focuses on the latter category. Sørensen and Waldorff (2014:3) define policy innovation as "*the formulation, realization and diffusion of new problem understandings, new political visions and strategies for solving problems.*"

Whereas the definition given by Sørensen and Waldorff is relatively 'new', the phenomenon of 'policy innovation' itself definitely has some history in the public sector. For example, public

officials have, under the slogan of ‘reinventing government’, in the 1980s and 1990s tried to render public policies more efficient (Osborne and Gaebler, 1992; Sørensen, 2014). What makes contemporary policy innovations distinct from their predecessors is the *collaborative manner* in which they tend to emerge. That is to say, it is not uncommon that the generation of a policy innovation is the outcome of an innovation process that involves a multitude of organizations (Van Buuren and Loorbach, 2009).

The collaborative character of recent policy innovations has, for the most part, been a consequence of the ‘wickedness’ of many of today’s policy issues (e.g. global warming, youth unemployment, poverty, obesity, etc.), and the inability of ‘traditional’ public management responses (such as markets, outsourcing, or regulatory prescription) to get a hold on these problems (Head, 2008).

In layman’s terms, wicked policy issues can be understood as policy problems that are persistent, and generally dealt with in a context of great uncertainty with regard to the nature of the matter and possible solutions (Rittel and Webber, 1973). Causal relations underlying these policy problems are often numerous and difficult to identify. Developments in one seemingly unrelated policy field can impinge in unpredictable and intricate ways on realities of another policy sector (Ney, 2009). This means that wicked policy problems typically transcend the portfolios of single organizations. ‘Traditional’ public management responses to complexity and uncertainty, such as technical (expert-driven) solutions and routine administrative solutions, for the most part take place in the hierarchical silo structures of organizations, and barely consider the involvement of other actors (Hartley, 2005). Therefore, organizations in the public sector have had great difficulty in taming the cross-cutting nature of wicked policy problems.

As a result, governments have set up collaborative arrangements as a means to tackle wicked policy problems (OECD, 2014). Here the rationale is that through collaboration across conventional boundaries in the public sector, innovative policy solutions emerge that better fit the wicked policy context. Sørensen and Waldorff (2014:6) have called these processes in which multiple organizations interact and participate to come up with policy innovations, ‘collaborative policy innovations’. In similar fashion, in this dissertation the term ‘collaborative policy innovation networks’ refers to the temporarily institutionalized collaborative governance arrangements that are central in these collaborative innovation processes.

Achieving unison among a multitude of actors for concerted innovative policy action is, however, not an easy exercise. Commonly, there is a certain degree of cognitive diversity and distance between organizations, which has to be overcome in order to reach an agreement on an innovative policy action (Van Buuren and Loorbach, 2009). ‘Cognitive diversity and distance’ refers to the multiple alternative perspectives and objectives held by the actors who participate in a collaborative policy innovation process (Van Buuren and Loorbach, 2009: 381).

Ideally, actors get a shared understanding of each other’s issues, concerns, and interests through processes of learning (Vinke-de Kruijf, Bressers and Augustijn, 2014), in which the fundamental problems and tensions are discussed in an atmosphere of mutual trust, and wherein the involved actors eventually arrive, in a transparent manner, at the best-suited solution for the targeted policy problem (Sørensen and Torfing, 2011:852). However,

meaningful interaction and fruitful collaboration across cognitive distance is of course only possible as long as the participants are willing to make sense of each other's perspectives (Grabher, 2004: 108), are not reluctant to collaborate, and do not hinder the collaborative process for strategic reasons.

If one of the latter is not the case, management may contribute to improving the quality of the interactions among participants within collaborative policy innovation networks (Torfing et al., 2012: 135). Such a view on the use of management in collaborative policy innovation networks is understood by certain scholars as *metagovernance* (Meuleman, 2008: 70; Voets et al., 2015: 3). Sørensen and Torfing (2005: 202), for example, define metagovernance as, "the endeavour to regulate self-steering policy networks (or collaborative networks) by shaping the conditions under which they operate."

Scholarly research, however, on the development of policy innovations and the value of collaborations as vehicles for fostering policy innovation is still in its infancy (Ansel and Torfing, 2014: 238-239). The discovery of the potential impact of collaboration, and its design, is relatively new, and its implications are not yet properly assessed (Ansell and Torfing, 2014: 238-239). In addition, there are only a few accounts which focus on the management of collaborations for producing innovative policy outcomes (e.g. Agger and Sørensen, 2016; Termeer and Nooteboom, 2014; Doberstein, 2015).

Therefore, the aim of this dissertation is to add new insights to the link between collaboration, policy innovation, and metagovernance (or management). In this way, we ('scholars') can get a real sense of the value of collaborations for generating policy innovations in the public sector, and how these collaborations can be optimally managed. Before this introductory chapter elaborates on the specific focus of the dissertation and articles, and what they cumulatively add to the existing scientific knowledge, the next sections discuss the exact definitions of the main concepts of this dissertation to avoid conceptual confusion.

## **Main concepts of the dissertation**

### **Policy innovation**

The first concept that is discussed in greater detail is policy innovation. As noted, policy innovation is a specific way in which governments can innovate. To understand the concept of policy innovation, however, we have to be clear about what is meant with the term *innovation* within the context of the public sector. It is conventional to begin every account of public sector innovation by comparing it to the private sector literature, as innovation, or actually *innovation studies*, is a well-established field within the business literature (Potts and Kastle, 2014).

Already in the 1940s and 1950s scholars were writing about how innovation could give companies a competitive advantage over rivals. At this time, Schumpeter (1942) – who is considered by many public sector innovation scholars as the first to coin a definition of the concept of innovation – wrote the book *Capitalism, Socialism and Democracy*, in which he stressed, inter alia, the novelty aspect of innovation. According to him, innovations are reflected in novel outputs, i.e. a new good or a new quality of a good, a new production method, a new market, a new supply source, etc.

Schumpeter viewed innovation as the basic dynamic mechanism of market economy growth and development in a process he called 'creative destruction' (Schumpeter, 1942: 82-85). Innovation, at the micro level, is this process operating in an organization as it originates, adopts, and implements the novel idea in such a way that the idea is organizationally embedded or otherwise retained. The organization becomes different and acquires new capabilities in consequence of the innovation.

The standard Schumpeterian definition of innovation, however, is foremost focused on a context of market competition through innovation. Innovation is thus viewed as a competitive strategy to create new profit opportunities for a business by developing new ways to create value (for the consumers). Yet, this competitive incentive is a very weak force in the context of innovation in the public sector (Potts and Kastle, 2014:123). The public sector (unlike politics) is by definition not a market context, but an institutionalized monopoly or monopsony. The public sector 'sells' to government, and government only 'buys' from the public sector. Public sector organizations do not compete on the basis of innovation, because they do not compete in a context of other organizations fighting for market share.

Innovation in the public sector is thus something different than what it means for the private sector. We cannot simply copy and paste the definition of Schumpeter to describe the meaning of innovation in the public sector. Nonetheless, what we can learn from the Schumpeterian view of innovation, according to De Vries et al. (2014), is that innovation means 'doing things differently'.

A definition which shows many similarities with Schumpeter's notions is the definition of Rogers (2003). Many public sector innovation scholars, such as Walker (2014), have referred to this definition of Rogers in their works. Specifically, Rogers (2003) writes that innovation, "is an idea, practice, or object, which is perceived as new by an individual or other unit of adoption." Hence, the difference between Rogers' view on innovation and Schumpeter's, is that Rogers assumes that innovation does not have to be objectively new, but rather it should be perceived as new. Innovation is thus a perceived newness.

Besides the aspect of perceived newness or doing things differently, there is much more behind the definition of innovation than meets the eye. According to Nauta et al. (2009) and Hartley (2006), a definition of innovation explicitly, or implicitly, always contains, amongst other things, assumptions about gradual change versus radical breakthrough, objective judgement of innovativeness versus social construct (see discussion in the previous paragraphs), and the alleged link between innovation and success or improvement.

Sørensen and Torfing (2011) have been most explicit in ascribing features to the concept to make it distinctively different from other analytical terms such as 'reform', 'change', or simply 'new ideas'. They define innovation as, "the intentional and proactive process of actors that involves the generation and practical adoption and spread of new and creative ideas, which aim to produce a qualitative change in a specific context." First of all, this definition indicates, just like the definition of Rogers (2003), that innovation is always relative to a specific context. The new is not necessarily novel to the world, but merely perceived to be new in a particular context or domain (Zaltman, Duncan and Holbek, 1973). Second, Sørensen and Torfing (2011:

850) argue with this definition that innovation is always an intentional and proactive process of involved actors. They write, “although the process of innovation is an open and unpredictable process, involved actors will deliberately try to change, or even improve, the current state of affairs.”

Third, the definition further makes clear that innovation is not merely about generating a new idea. A ‘creative’ or ‘new’ idea only becomes an innovation when it is implemented, and thereby able to produce some significant effects. Fourth, Sørensen and Torfing foresee with their definition that innovations are not about delivering more or less the same kind of goods, services, or solutions, but rather about changing the form, content, and repertoire of goods, services, and organizational routines, or even transforming the underlying problem understanding, objectives, and programme theory. Hence, Sørensen and Torfing foresee innovation as a form of radical change. Fifth, although innovation carries a positive connotation, the concept itself is not about whether the consequences of an innovation are good or bad (Hartley, 2005).

All aforementioned definitions help to build a definition of what is considered policy innovation in this dissertation. Specifically, ‘policy innovation’ is defined as: “*deliberate creative search processes used to develop and realize new policy ideas and solutions which radically transform the way in which we are imagining and doing things in the public sector.*” Similar to the definition of Sørensen and Torfing, this definition recognizes that innovation in policies is a deliberate effort of governments to radically alter existing policy actions and solutions. Furthermore, in accordance with Sørensen and Torfing’s view, this definition of policy innovation foresees that the concept in itself is not a value-laden concept, in the sense that an innovation in policies is not merely about developing and implementing a better or more effective policy approach. In fact, there is a whole graveyard of policy innovations in the public sector. Nevertheless, we cannot escape the reality that normally governments *innovate* to improve their policy actions. Furthermore, this dissertation’s definition of policy innovation captures the aspect of novelty, as was suggested by Schumpeter and Rogers.

What is confusing about the concept of policy innovation is that it can be perceived as both a process (i.e. the innovative process in which actors are working on radical new ideas), and a product/outcome (i.e. the innovative end product). This dissertation has a process focus regarding the notion of policy innovation. This is a consequence of the approach that is used to study the cases. That is to say, in the articles I work retrospectively on a case, i.e. based on a certain process outcome (an innovative new policy plan, or a vision document, for example), and trace back the origins and developments of this specific process. This allows me to connect the result of a process of collaborative policy innovation (‘outcome’) with the deployed metagovernance strategies, the behaviour of the involved actors, and their reciprocal interactions within collaborative policy innovation networks (‘process development’). As such, the *innovation outcome* is given in the empirical cases, while the interactive and managerial dynamics in the *processes* (‘the creative and innovative search processes’) are the locus of study.

This dissertation’s definition of policy innovation differs a little from the earlier-mentioned definition of Sørensen and Waldorff (2014). More particularly, Sørensen and Waldorff (2014: 3) operationalized ‘policy innovation’ as: “*the formulation, realization and diffusion of new*

*problem understandings, new political visions and strategies for solving problems.*” What lacked in this definition, was the *intentional effort* of governments to innovate, and the radicalness of the foreseen change, as was discussed, inter alia, by Sørensen and Torfing (2011). Hence, this dissertation’s definition also captures the deliberate effort of governments to innovate. In the next section, the concept of collaboration is discussed in greater detail.

## **Collaboration**

In the past 30 years, the practice of government has changed from a context in which the ‘state’ was the dominant unitary actor setting policy, to one in which policy influence is more horizontally distributed among state, civil society, and private actors across various policy levels, sectors, and jurisdictions (Doberstein, 2015). In the scholarly literature this trend has been characterized as the shift from ‘bureaucratic governance’ to ‘collaborative governance’ (Ansell and Gash, 2008). Here, collaborative governance or collaboration is seen as a working method of collective decision-making, where actors engage with each other in a consensus-oriented deliberative process for inventing and implementing public policies and procedures for managing public resources (Johnston et al., 2011:699).

Collaborating, or collaborative processes of governance, are often justified on the basis of what Huxham (1996) has called the ‘collaborative advantage’. The concept of collaborative advantage entails that, by working together, actors are capable of resolving policy and coordination problems that could not be achieved by an organization or government department acting alone. Or, as Vangen and Huxham (2010: 163) wrote, “a collaborative advantage represents a synergy that can be created only through joint-working.”

Studies focusing on aspects of collaborative governance have overall tended to view the sketched governance trend through a positive lens, and have assumed that the collaborative advantage is realized just because of the joint effort of involved actors (McGuire, 2006). This is quite strange, given the fact that Huxham already in 1993, and in subsequent empirical studies, warned that in practice the collaborative advantage is rarely achieved due to difficulties of managing inter-organizational arrangements, actors, and their competing interests, resulting in many collaborations not creating a ‘collaborative advantage’ but instead evolving into a ‘collaborative inertia’ (Vangen and Huxham, 2010: 163).

In recent years, more critical assessments of collaborations have emerged. Rigg and O’Mahony (2013), for example, find that a consistent theme among participants in collaborations on the ground is that their high expectations of working together are not realised, and they identify low attendance, personal agendas, poor managerial relationships, and low trust as key barriers to effective collaborative efforts. Yet, others retain an optimistic sense of the potential of collaborative governance, but lament the perennial gap in collaborative governance research, that is, empirics that test whether more inclusive and deliberative forms of collaborative governance achieve their objectives (Doberstein, 2015:1). In particular, under what circumstances do close collaborations between actors produce policy outputs that could not be achieved by one single actor acting alone?

This dissertation builds on the (empirical) scholarly debates in the collaborative governance literature. Specifically, this dissertation looks at under what circumstances the joint work effort of actors can produce bold, innovative, and transformative policy solutions. Hence, in

line with the earlier-discussed definition of Johnston et al. (2011), the notion of collaboration is in this research understood as a working method of collective decision-making between a group of actors with the intention to develop bold, innovative, and transformative policy solutions.

In the presented articles of this dissertation the concept of 'collaboration' is often not explicitly mentioned as main concept. Instead, the concepts of 'collaborative (policy) innovation networks', 'networks', or 'collaborative arrangements' are used to refer to the working dynamics between a group of actors. I do realize that there is a difference in meaning between the term 'collaboration', and the concepts of collaborative policy innovation networks, networks or collaborative arrangements. The latter concepts refer mainly to *a temporal institutionalization of a form of interdependent but operationally autonomous and self-governing actors who collaborate to realize negotiated objectives that contribute to what ranks as public purpose at a given point in time* (Scharpf, 1994; Kickert, Klijn and Koppenjan, 1996; Sørensen and Torfing, 2007). As such, 'collaboration' is used in this dissertation to point out the collaborative working method actors use to develop shared innovative policy outcomes, whilst the concepts of collaborative (policy) innovation networks, networks or collaborative arrangements are used to refer to the temporally institutionalized inter-organizational arrangements in which the 'collaborations' take place.

In the articles, I try not to depart from either a positive or negative understanding of the concept of collaboration. I simply try to value the dynamics of the collaboration based on the empirical data that follow from the cases. This will be visible in the conclusions of the presented empirical papers. Now I turn to the section which introduces the concept of metagovernance (and network management).

### **Metagovernance and network management**

When I started my PhD, it was the goal to position the dissertation in the research niche of metagovernance. The concept of 'metagovernance' was relatively new, and was one of the new magic concepts within the network governance literature (Cheng and Voets, 2017). The first article of this dissertation is thus written in the 'metagovernance tradition'. In this article, metagovernance was defined as, "the management of (self-steering) collaborative networks", which was in line with the definition of metagovernance of Voets et al. (2015: 983). Yet, it was immediately remarked that the concepts of 'network management' (i.e. a method of guidance which focuses on intermediating and coordinating inter-organizational policy-making, according to the definition of Klijn and Koppenjan in their 2006 article), and this specific 'metagovernance' definition could be used interchangeably, because they both refer to the practices of persons who facilitate collaborative processes in (self-steering) networks.

Later in the dissertation, the concept of network management was used on its own. There were two reasons for this. First of all, due to its newness, there was a lot of conceptual unclarity with regard to the concept of metagovernance, and how it was defined by various scholars. To elucidate, over the past 20 years nine different conceptualizations of metagovernance have been developed by scholars (Cheng and Voets, 2017: 10-11). Some of these conceptualizations are also contradictory. Jessop (2003), for example, defined metagovernance as the governance of governance. More specifically, according to Jessop's 2003 definition, metagovernance entails the mixing of hierarchical, market-oriented, and

network-related coordination instruments to achieve the best possible outcomes in collaborative processes. Torfing et al. (2012), in contrast to the definition of Jessop, define metagovernance, “as the deliberate attempts to facilitate management, and direct more or less self-regulating processes of interactive governance without reverting to traditional statist styles of government in terms of bureaucratic rule-making and imperative command.”

Again other scholars, such as Kooiman (2003), give a more value-oriented focus to metagovernance. Specifically, Kooiman defines metagovernance as third-order governance, which is an order where values, norms, and principles are advanced according to which governance practices can be formed and evaluated. In this sense, metagovernance feeds, binds, and evaluates governance exercises concerning different values and principles (Cheng and Voets, 2017: 10). Hence, to avoid confusing the use of the concept of metagovernance based on the definition of Voets et al. (2015) with other metagovernance definitions, I decided to use the term ‘network management’ in the other empirical articles.

The second reason for using the concept of network management had to do with the notion of self-steering networks – which is a central aspect of the metagovernance definition of Voets et al. (2015). When self-steering is the main form of participation, it implies that the participants in the collaboration mainly take the initiative for managing the network dynamics. However, in the empirical cases of this dissertation, the authority to facilitate the network processes through management was often delegated to one central person (i.e. the network manager). That does not mean that all management activities were done by the network manager alone. In the empirical cases there are multiple examples that several management interventions were also initiated by ordinary network members – which in some respect is a form of self-steering network management. Nonetheless, given the fact that in the empirical cases most authority was placed with one central person, and the main task of this person was to manage the network dynamics, I decided to use in the other empirical articles the term network management rather than metagovernance.

The concept of network management has already been the subject of considerable research, most notably in the governance literature (e.g. Huxham and Vangen, 2005; Milward and Provan, 2006; Agranoff, 2006; Koppenjan and Klijn, 2004). Most of these studies focused on the management of a specific scenario of interdependency-driven network engagement, that is, the reproduction and optimization of existing services or policy solutions, but then in an integrated manner. However, as mentioned, innovation entails a clear break from the past, and thereby the radical transformation of existing and failed policy practices, ideas, and solutions (Sørensen and Torfing, 2011). Or, as Stevens and Verhoest (2016a: 19) state, “within collaborative policy innovation processes, upfront participants barely know what to expect; the only certainty they have is that the to-be-developed innovative policy solutions are meant to act a game-changers and radically alter the way in which an intertwined policy problem is addressed.”

For that reason, scholars have argued that the management of collaborative policy innovation networks is different from the management of ordinary networks, as managers at the micro level must not only steer for integrated results and compromises, but must also foster creativity and out-of-the-box thinking among participants to develop radically new policy paradigms, and manage the earlier-mentioned unknowns that surround processes of

innovation in the public sector (Bason, 2016; Sørensen, 2014). Hence, the concept of network management is defined in this dissertation as the *(micro-level) endeavours and interventions of a central actor (the manager) to facilitate the development of innovative policy solutions in collaborative networks, by shaping the conditions under which these networks operate and involved members interact with each other.*

## **Theoretical, methodological, and practical value of the dissertation**

After having offered definitions for the concepts of collaboration, innovation and network management, the next step is to state the relevance of this dissertation. This is structured in three parts: theoretical, methodological, and practical value.

### **Theoretical value**

First, the theoretical value of this dissertation is stated. At the start of this PhD trajectory, several research groups from different European universities were already working on the concept of innovation in the public sector in various (international) research projects. Most noteworthy were the CLIPS ('Collaborative Innovation in the Public Sector') research project of the University of Roskilde, granted by the Danish Strategic Research Council, and the EU 7<sup>th</sup> Framework project LIPSE ('Learning from Innovation in Public Sector Environments').

The CLIPS project, which started in 2001 and is still ongoing, has been a front-runner in promoting collaborative innovation in the public sector agenda. In this research project, scholars for one of the first times focused on how partnerships and collaborations could be used as vehicles to develop innovative and transformative public sector services. Amongst other things, the emergence of new forms of public libraries were examined in detail. The Danish Agency for Library and Media in 2010 set a new strategy for public libraries in Denmark, with the goal that the library sector should reinvent the role of libraries to match the needs of library users in contemporary society. These were collaborative processes between different stakeholders. Hence, scholars from the Roskilde University used, *inter alia*, these innovation processes to discern the barriers and enablers to collaborative processes of innovation.

The EU 7<sup>th</sup> Framework project LIPSE was an international research project which, in a similar vein as the CLIPS project, searched for drivers and barriers to successful innovation in the public sector in eleven EU countries and seven policy sectors. The project started in 2013 and finished in 2016. They focused on social innovation processes. The project was built on five pillars; that is to say, the scholars in the research project particularly examined whether we can measure public sector innovation, the influence of structures, networks and leadership on social innovation processes, risk governance in social innovation, how feedback loops (in terms of accountability, learning, and ex-post information) affect new innovation processes, and what the barriers and determinants of adoption, diffusion, and upscaling of ICT-driven social innovations are. This international research project was coordinated by the Dutch Erasmus University, Rotterdam.

Over the years, the field of collaborative innovation has matured, with the publication of *Public Innovation through Collaboration and Design* by Ansell and Torfing (2014), and *Collaborative Innovation in the Public Sector* by Torfing (2017). In addition, the outputs of the CLIPS and LIPSE projects, as well as a special issue on the notion of collaborative innovation in

*The Public Sector Innovation Journal* in 2012, have contributed to a richer understanding of the link between the concepts of innovation and collaboration. However, at the start of this dissertation most of these projects were still under way, and most of these research outputs had not yet been published. In the research proposal for this dissertation, which was presented in December 2014, three observations were made to validate the theoretical aim of this PhD research.

*First of all*, it was observed that many articles, working papers, and conference papers were highly theoretical, and viewed the potential for collaborative innovation in the public sector mainly through a positive lens. For example, the 2011 article of Prof. dr. Eva Sørensen and Prof. dr. Jacob Torfing in *Administration & Society* elaborated on the potential of collaborative innovation processes, defined the concept of public sector innovation, and discussed how network-based forms of innovation could cure the deficiencies of hierarchically structured innovation processes. Because of this theoretical and positive focus of many articles, I remarked in my research proposal that many empirical puzzles still needed to be solved (for example: Is it always the case that collaboration ensures that public sector innovation draws upon and brings into play all relevant innovation assets in terms of creativity, knowledge, resources, political authority, etc.), and various ‘accepted’ truisms had to be empirically scrutinized, in order to improve our knowledge with regard to the value of collaborations as vehicles for the promotion of policy innovations.

*Second*, I pointed out that the concept of policy innovation, compared to other forms of innovation in the public sector, was for a large part neglected in the public sector innovation literature. Eva Sørensen made a similar observation in a recent article (2016:13). Specifically, she noted, “issues related to innovations in polity, politics and policy deserve more attention since this has not been on the top of the public sector innovation research agenda.” She believes that the main barrier to putting policy innovation on the public sector innovation research agenda seems to be disciplinary boundaries.

That is to say, public sector innovation was originally developed as a part of a public administration research endeavours. Scholarly focus was particularly on the role of different forms of steering (governance innovations), service innovations, and technological innovations (such as the impact of ICT tools on public service delivery) (Kraemer, Andersen, and Perry, 1994). This disciplinary anchorage has prevented the public sector innovation agenda from spreading from governance, technological, and service innovations to issues related to innovations in polity, politics, and policy, which are considered to be more political science issues. Hence, it has been my goal to contribute to the public sector innovation agenda by specifically zooming in on policy innovation processes.

*Third*, although among scholars in the research niche of collaborative innovation there has been agreement that management can contribute to improving the quality of innovation outcomes (Van Buuren and Loorbach, 2009: 381; Sørensen, 2014), little empirical research has been done on how collaborative innovation processes have to be managed. In 2014, the best-known contributions to the research field were the *hands-on* and *hands-off* management approach of Sørensen, and the four associated strategies of framing, design, facilitation, and participation. This conference paper was a mere theoretical exploration of the possible management dynamics in processes of collaborative policy innovation.

Other well-known contributions to the research field, in terms of the management of collaborative processes of innovation, were various taxonomies of management roles, such as the Innovative Leadership Model of Termeer and Nooteboom (2014), the three public design attitudes of Bason (2014), and the Facilitative Leadership Model of Ansell and Gash (2012). Given that these contributions were mainly theoretically inspired and quite abstract, I therefore noted in my research proposal, in line with the suggestion of Sørensen (2014), that the field of collaborative innovation was in need of more empirical studies on micro-level management strategies in collaborative processes of innovation. In this way, we (i.e. ‘the scientific community’) would get a better understanding of how managers can live up to their potential in processes of public sector innovation that take place in collaborative networks.

Notwithstanding the efforts of scholars in the research field of collaborative innovation, these three research gaps demonstrated that the actual inside dynamics in collaborative processes of policy innovation, and the management of these processes, were not well understood at the time of the start of this dissertation (and are up-to-date still open puzzles despite the increased scholarly attention). Hence, the following theoretical aim was defined in the research proposal: *“this PhD attempts to open up the management blackbox of policy innovation processes, to get more insight into how management can safeguard the development of an innovative policy outcome that to a certain degree is supported by (all) the involved parties.”*

Without exaggerating my research contributions, this dissertation has provided more context to the managerial practices in collaborative processes of policy innovation. Three of the empirical articles focus on micro-level managerial dynamics in collaborative innovation networks. In these empirical studies, three taxonomies of management roles are empirically scrutinized. Furthermore, in another empirical study it is shown why some representatives are more likely to engage in learning activities during processes of collaborative innovation than others. Of course, more empirical research is needed to develop a contingency model for the management of collaborative processes of policy innovation. Nevertheless, with this dissertation we (‘as scholars’) have gained more theoretical knowledge about the conditions and circumstances under which management instruments, interventions, and strategies are (to be) used to foster the development of innovative policy solutions in collaborative networks. Now, I turn to presenting the methodological value of this dissertation.

### **Methodological value**

When I started the dissertation, there was no commonly accepted framework for analysing empirical cases in the research field of collaborative innovation (Sørensen and Torfing, 2010:13). Yet, there were a few scholars who made use of a rather similar research strategy, called ‘backward mapping’, to empirically analyse collaborative processes of public sector innovation (Sørensen and Torfing, 2010; Sørensen and Torfing, 2011). Backward mapping<sup>1</sup> is

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<sup>1</sup> Backward mapping is in its core quite comparable with the general aspects of process-tracing (hereafter referred to as PT). Just like PT, backward mapping seeks to trace causal mechanisms. More specifically, my research ambition and focus align closest with what Beach and Pedersen (2013) have described as *theory-building* PT. In its purest form theory-building PT starts with empirical material and uses a structured analysis of this material to induce a plausible hypothetical causal mechanism, whereby (independent variable) X is linked to (dependent variable) Y. The logic of theory-building PT is best expressed in the following quote of Beach and Pedersen (2013), “it is a capital mistake to theorize before one has data ... insensibly one begins to twist facts to suit theories, instead of theories to suit facts.” The main difference between the two research strategies is

a research strategy that, based on a certain outcome, traces back the origins of the development of a specific process (Elmore, 1979: 602). This research strategy thus allows for connecting a particular innovation outcome with the interaction processes and management practices in collaborative networks, and discovering what roots lie at the heart of the development of the innovation process (Sørensen and Torfing, 2010:13). In three of my empirical papers, the methodology of backward mapping is used. Hence, the way in which the backward mapping analyses were performed, including the coding strategies, help the research field to develop more methodological guidelines with regard to using this methodological research approach.

However, the biggest methodological contribution of this dissertation to the research field of collaborative innovation is the introduction and use of the Exponential Random Graph Modelling (ERGM) methodology to analyse and make inferences about (learning) interactions between involved actors in collaborative policy innovation networks. Until now, ERGMs have not been applied frequently in public administration literature or governance studies (Stevens and Verhoest, 2016b). The methodology has a longer tradition in the fields of conflict management and peace studies (Cranmer et al., 2012), disease studies (Rolls et al., 2013), and neurosciences (Teleford et al., 2011). Exponential Random Graph Modelling is a methodology that aims to explain tie-formation (Goodreau, 2007). In layman's terms, this means that the methodology is capable of drawing inferential conclusions about why individuals have the tendency to connect (e.g. learning) with some people, and not with others, in collaborations. In Chapter 3, more information is provided about the merits of the ERGM methodology, in comparison to more traditional methodologies such as case study research or regression analysis, for studying interactive network dynamics. I received a research award, for the use of the ERGM methodology in the paper of Chapter 4, at the 2017 International Research Society for Public Management (IRSPM) conference. The exact methodologies used in each empirical case is outlined in table 1, and discussed more in-depth in the methodological section of the corresponding empirical chapter.

### **Practical value**

This dissertation also has a practical value. In this dissertation, I specifically attempt to make my research findings relevant for practitioners. Therefore, I do not speak of conclusions, but instead talk about lessons that can be learned from the empirical cases. Moreover, I decided to publish most of my articles open-access. In this way, interested practitioners can, without any costs, read the articles. In addition, the article about the ERGM methodology is written in such a way that is easy to understand for, for example, consultants or civil servants who want to use the methodology in their daily practices. This is quite different from the articles of, amongst others, Cranmer et al. (2012) and Goodreau (2007), who use very technical, mathematical language to explain and validate their ERGM research findings.

For practitioners, it is even possible to freely access the data of the ERGM analyses of Chapter 4 to replicate the analyses, and thereby practise the use and *R*-coding of the ERGM methodology. The empirical data of the third article of this dissertation can be accessed on Harvard Dataverse. Finally, in the conclusive chapter of this dissertation I present eight reflections that emanate from the six articles (and a seventh Dutch article) about the micro-

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that backward mapping starts from a known outcome/result and then traces back the origins and development of the process, whereas in theory-building PT this does not have to be the case.

level management of processes of policy innovation in collaborative networks. In the end, I hope that this helps the dissertation to move beyond academia, and inspire practitioners such as civil servants, policy-makers, and consultants to (re)design their management practices for collaborative processes of policy innovation between various public sector organizations. What follows are the research questions of this dissertation.

## **Main questions of the dissertation**

In line with the theoretical, methodological, and practical contributions of this dissertation, the following main research question can be defined:

How does management enhance collaborative processes of policy innovation?

The main research question is further broken down into four subquestions:

1. How can collaborative processes of policy innovation be conceptualized?
2. What does the literature say about collaborative processes of innovation and their management?
3. How did the network members in the empirical cases interact with each other, and what management strategies did the managers use to facilitate the collaborative processes of policy innovation, for what reasons, and with what effects?
4. When does management foster or hinder collaborative processes of policy innovation?

Although the dissertation is structured around the six international publications and one Dutch article, the different articles will provide answers to the aforementioned research questions. Table 1 (see final page of this introductory chapter) presents a schematic overview of the outline of the dissertation based on the research questions. In the final section of this introduction, I elaborate on the story outline of the dissertation, but first the empirical cases are introduced.

## **Introducing the cases**

To provide an answer to the aforementioned research questions, the managerial dynamics in three administrative networks working on the development of innovative policy plans are examined: The National Plan of Sustainable Transport, the Flemish Plan of Sustainable Spatial Planning, and the Flemish Plan for Coastal Protection. The three cases are approached as single cases. Following the earlier-mentioned definition of collaborative policy innovation networks, there are three specific reasons why the interactive dynamics in these administrative networks can be regarded as collaborative processes of policy innovation.

*First of all*, in all of the cases there was a deliberate attempt by the actors to change the state of affairs in the relevant policy domains. The Belgian transport domain, for example, had, from the early 1970s onwards, like many other Western European countries, experienced a continued growth in demand (ICDO, 2000: 70; FOD M&V, 2000: 18). This increase was met in particular with the rapid expansion of road freight transport. In 1995, for example, more than 76% of the goods entering Belgium were transported across the mainland by trucks and lorries

(Eurostat, 2014). Despite this substantial (and 'economically' beneficial) rise, the development also brought with it various negative consequences that threatened the position of Belgium as a transport hub, polluted the environment, and harmed the public health – the most important negative consequences being congested roads, an increase in greenhouse gas emissions, and a rise in the number of road accidents (ICDO, 2000: 70-71).

Simultaneously, there were increased European and international pressures to green the domestic transport sectors (ICDO, 2000:70). Hence, public officials soon realized that their *business-as-usual* policy strategies were no longer compatible with the renewed sectorial and political contexts (ICDO, 2000: 71/437). As a result, the Federal Act on Sustainable Development of 1997 was established which, inter alia, urged the network members of the administrative network 'to bolster a sustainable transition in the freight transport domain'. This 1997 Federal Act formed in the first case the 'mandate' for the administrative network to deliberately search for new solutions regarding sustainable transport on Belgian territory.

Also in the second and third cases, policy documents spoke of a deliberate goal of the inter-organizational networks to change the way in which the government addresses problems of spatial planning and coastal protection. For instance, in the second case, the 'bisconcept nota' of 24 April 2015 urged the members of the administrative network to actively search for 'dynamic and unconventional policy directions' which would be able to deal with the future challenges of the field of spatial planning (Vlaamse Regering, 2015: 2 and 6). In the third case, the 'procesnota' of 13 July 2016 encouraged the members of the administrative network to sit together, and develop integrated and intertwined policy solutions for future challenges surrounding the coastal area by the year 2030 (Ruimte Vlaanderen, 2016).

*Second*, the actors in all three cases intended to look for solutions that radically altered the objectives, strategies, and policy visions underlying the governmental actions and interventions in the involved policy domains. To elucidate, in the first case, for instance, with the emergence of the environmental and sustainability considerations, a countervailing force against the traditional approach of competitiveness and economic development was posed in the transport sector. Freight transport was no longer solely considered as an instrument for economic growth (Stevens and Verhoest, 2016a).

One of the explicit goals of the Federal Act on Sustainable Development of 1997 was to stimulate intermodal freight transport as a means to shift goods away from the roads to the railways and inland waterways. This concretely meant that the 1997 Federal Act demanded burdening the road haulage system and making alternative modes of transport more attractive to use. However, before the 1997 Federal Act, actors were most accustomed to investing public money in modernizing and maintaining the road infrastructure, and less concerned with the development of the sectors of inland navigation and rail freight transport. In addition, the 1997 Federal Act stimulated public actors to look at the transport sector in a holistic manner. This was also radically new, as normally policy actions were designed for the improvement of single transport modes.

With regard to the aim of the collaborative process in the second and third cases, it becomes clear from the texts of the 'bisconcept nota' of 24 April 2015 and the 'procesnota' of 13 July 2016 that policy-makers were searching for a policy paradigm shift for the policy sector of

spatial planning and coastal protection (Vlaamse Regering, 2015: 2 and 6; Ruimte Vlaanderen, 2016). That is to say, the clusters of assumptions, beliefs, policy theories, and policy objectives of existing policies had to be changed in such a way that policy-makers would be able to deal with the future challenges of the policy sectors by the years 2030 and 2050. In my view, this demand for a new policy paradigm can also be understood as the need for a radical policy change.

*Third*, in all the cases a wide nexus of public sector organizations, from various policy sectors and sometimes tiers of government, were involved in the deliberations on the emergence of innovative policy plans. This was necessary, as competences regarding issues of spatial planning, transport, and coastal protection were spread over a multitude of departments and agencies from different policy sectors, and sometimes even different levels of government. These three features combined align with the earlier-defined definition of 'policy innovation', and the collaborative nature of these types of innovation processes. To this end, I believed that these cases could provide me with more information about how network management could safeguard the development of an innovative policy outcome in collaborative policy innovation networks.

Between the three cases there are, besides the deliberate, radical, and collaborative nature of the innovative development processes, two other similarities. First of all, in all three cases I look at the generation and selection phases of the innovation process (Sørensen and Torfing, 2010). The generation phase involves the development, presentation, and cross-fertilizations of ideas, and presupposes the identification of problems and opportunities, clarification of relevant goals and values, and questioning of long-held assumptions among involved actors (idem: 9). The selection phase entails the stage where decisions are made about which ideas are worth pursuing. Ideally, these ideas are big, bold, transformative, and broadly accepted among the key stakeholders (ibidem). The interactive dynamics regarding the implementation, dissemination, or even upscaling of the innovative ideas are thus not examined. This decision to specifically look at the initial stages of the innovation process is *theoretically* inspired, since the scholarly literature has devoted most attention to the barriers and enablers of the implementation of innovations, and not so much to the design phase (see Sørensen, 2016).

A second similarity between the three cases is that administrative networks are examined. For some researchers this may sound strange, as the dissertation's focus is on processes of policy innovations, but I do not dedicate specific attention to the interactive dynamics between politicians, Ministers and/or cabinet members. The reason has to do with the fact that the processes of policy innovation that were examined were politically very salient. Moreover, some of these processes are still ongoing. Hence, to avoid respondents being hesitant about sharing information about their experiences, strategies, political visions, reasons to participate, and behaviours – and to avoid that my research would have a negative impact on the precarious political discussions – I made the decision to focus on the administrative dynamics in these innovation processes.

The focus on the administrative level was, however, very revelatory. Although the cases were not easily accessible, especially in the last two cases, I had the opportunity to speak to all involved organizational representatives about the intertwined nature of the collaborative

policy innovation processes. From the cases, I learned that often the greatest willingness to innovate was present in the administrative layers of government. The political level, instead, reduced the level of innovativeness or radicalness of the proposed policy solutions, as the political leaders had to make compromises or experienced fear to be responsible for radical and intertwined policy transitions.

There are, however, two major differences between the cases. First of all, the outcome of the collaborative policy innovation process in the first case differs from the outcomes in the second and third cases. In the first case, the Federal Act of 1997 installed a policy cycle which obliged the actors to come up with a holistic transport strategy, with an outlook for the next decade (including policy actions, allocation of resources, coordination mechanisms, and measurable objectives), by the year 2000 (art. 2/1, art. 7). After three years, however, the involved actors had not yet managed to reach unison. In point of fact, the generation process was eventually stopped by the network manager. From then on, every department and agency could see for itself how much time and effort would be dedicated to a sustainable transport transition, without being pressured by peer organizations or shared objectives. The development of a National Plan for Sustainable Transport was thus a failed collaborative policy innovation process in terms of not reaching a shared agreement on an innovative policy plan.

In cases two and three, the administrative network members did manage to reach a shared agreement on what they assessed as ‘relatively innovative’ policy strategies for spatial planning and coastal protection. By comparing cases with different outcomes, I hoped to get a better gist of the interactive dynamics between representatives in collaborative policy innovation processes – and, perhaps, see similar management instruments, but also different managerial interventions, as the conditions to innovate were not similar in the cases.

The second difference between the cases is that the administrative networks in cases one and three were *multi-level* administrative networks, whereas in the case of the development of a Flemish Sustainable Spatial Planning Policy Plan (FSSPPP) actors from only one level of government (i.e. the regional level of Flanders) were included in the administrative process. During the development of the National Plan for Sustainable Transport (NPST), actors from the federal level and the three regions (Flanders, Wallonia, and the Brussels Community) were involved. In the third case, actors from the region of Flanders and the province of West Flanders worked together to develop innovative policy solutions for the coastal area (i.e. the administrative FCPPP network). The articles in this dissertation will show that these institutional contexts also influenced the collaborative innovation processes with regard to the issues that were discussed and the balancing acts the network manager of the collaborative arrangements had to make. Nonetheless, by studying the different institutional dynamics of the three cases, I do capture the full (unique) context that the Belgian federal state offers in my analyses (Billiet et al., 2006: 3).

## **Story outline of the dissertation**

The chapters of this dissertation are the articles I published during my PhD trajectory. I decided to keep the order of publication as the structure of my dissertation. The reason for this is that it shows the exact road I took to get to where I am today. For the reader this is interesting, because they can read between the lines my developments in perspective, but also as a

researcher. The different chapters are stories in their own right, but together they provide a comprehensive answer to the research subquestions.

The dissertation starts with Chapter 2, which presents the first published paper. My supervisor, Prof. dr. Koen Verhoest, co-authored this article. In the article, we focus on one of the empirical cases of my dissertation. To be more specific, the development of the National Plan for Sustainable Transport is analysed. We use the Network Management Triangle of Alexander Gaus (2014) as a framework, to provide an answer to the question: *why were the metagovernance efforts not sufficient to safeguard the generation of a policy innovation for sustainable transport in the collaborative network?* The reason for choosing this framework is that Alexander Gaus (2014) clustered the different salient goals mentioned over the years by influential scholars (such as the works of Coleman, 1990; Burt, 1992; Koppenjan and Klijn, 2004; Provan and Kenis, 2008; DiMaggio and Powell, 1983; Kahneman and Tversky, 1979; Provan and Milward, 2001) as necessary for a network manager to adhere to in order to 'properly' facilitate collaborations in networks. As such, by comparing the metagovernance actions of the network manager to the salient goals of the framework, which we perceived as a 'normative framework', we were able to gain a better understanding of the performance of the network manager in the empirical case. The first article particularly helped me to understand how decision-making occurs in a dualistic federal system, and how attempts at innovation occur at the administrative level.

Chapter 3 presents the theoretical and methodological article of the dissertation. The article identifies two generations of studies in the field of collaborative (policy) innovation. Furthermore, it describes the methodological struggle we experienced to empirically analyse the determinants that explain why representatives in collaborative processes of innovation connect more easily with some network alters than with others. The take-away message of this article is that in prospective studies more attention needs to be devoted to the determinants that explain why individual actors engage in, or refrain from, practices of learning, resource-sharing, and commitment-building with some stakeholders and not with others in processes of collaborative policy innovation. This will allow scholars to gain a better understanding of the reasons why a certain interactive dynamics emerges in a collaborative policy innovation process. Furthermore, we make the claim that a perfect way to make inferences about the interactive dynamics in such processes is to make use of the statistical network methodology of ERGM.

Chapter 4 discusses my first single-authored article. This article is an extension of the article presented in Chapter 3. In this article, I use the ERGM methodology to make inferences about why representatives were more likely to learn from some network alters than from others in the second empirical case of my dissertation: the development of an innovative Flemish policy strategy for spatial planning. I conceptualize 'learning' in a multidimensional way. As such, the article presents various reasons why actors learned from different people in different ways in the collaborative policy innovation process. The article helped me to get a better view on how, and why, certain relationships emerge in collaborations, whereas other dyadic learning interactions proceed more 'sluggishly'. This ERGM paper was awarded with a New Researcher's Award at the 2017 IRSPM conference. Furthermore, a Dutch version of the paper, co-authored by Lars Dorren (MSc), finished fourth (out of 36 contestants) in the best paper award competition of the 2017 Plandag, which is a Dutch-Flemish practitioners' award

in the field of spatial planning. The Dutch version of the paper is added in the appendix of this dissertation.

In Chapters 5 and 6, I present the findings of papers that, in terms of analysis, are comparable to the article of Chapter 2. In a similar vein, two taxonomies of management roles are empirically scrutinized, to see which types of micro-level management interventions the network manager utilized and with what effects. The starting point of the two articles is the lack of theoretical knowledge about specific micro-level management strategies to facilitate collaborative networks for the promotion of policy innovations, since (as was mentioned earlier) within this field of research mere ‘abstract’ taxonomies of management roles have been developed. To this end, I intended to go one step further with my analyses, and show how these management roles should be performed. The paper presented in Chapter 5 was written together with Prof. dr. Annika Agger of the Roskilde University. I visited the Roskilde University as a guest researcher in January and February 2017. The article presented in Chapter 6 is again a single-authored paper.

In Chapter 7 a small discussion paper is presented which, on the basis of the empirical data from the articles in Chapters 2, 5 and 6, proposes a new management role (or focal lens) – that of ‘the network manager as therapist’ – and urges scholars to examine more closely in prospective studies the ‘inner worlds’ and discomforts individuals experience when participating in collaborative processes of policy innovation.

Chapter 8 is the final chapter of this dissertation. In the chapter, eight reflections are presented which emanate from the different articles. Specifically, this chapter offers the final answers to the dissertation’s main question: How should the Ostrich’s dance be managed in collaborative policy innovation networks? Furthermore, the conclusions are put in a broader perspective, and related to the long and rich literature tradition of network management.

Ch.	Title	RQ	Empirical work	Published Article/book chapter
1	Introducing the Ostrich's dance.	Main	-	-
2	How to metagovern collaborative networks for the promotion of policy innovations in a dualistic federal system?  (Co-author: Prof. dr. Koen Verhoest)	1, 2,3 & 4	Single case study methodology. Document analysis, seven interviews with high-ranked policy officials and a stakeholders' meeting with 25 end users of transport policies.	Article
3	A next step in collaborative policy innovation research: Analysing interactions using Exponential Random Graph Modelling.  (Co-author: Prof. dr. Koen Verhoest)	2	A literature and methodological review.	Article
4	Individual learning behaviour in a Flemish collaborative network.	3 & 4	A pretested survey with standardized questions for 12 representatives in combination with an interview with each of the representatives. ERGM methodology used to analyse the survey data.	Bookchapter  (Forthcoming, March 2018)
5	Managing Collaborative Innovation Networks – Practical Lessons from a Belgian Spatial Planning initiative  (Co-author: Prof. dr. Annika Agger)	1, 2,3 & 4	Single case study methodology. Document analysis and 12 interviews with high-ranked policy officials.	Article
6	How to manage collaborative policy innovation networks? Practical lessons from a Flemish Coastal Planning Initiative.	1, 2,3 & 4	Single case study methodology. Document analysis and 13 interviews with high-ranked policy officials.	Article
7	The network manager as therapist.	3 & 4	A small discussion paper on the basis of the similar empirical data of papers presented in Chapters 2, 5, and 6.	Article
8	How to manage the Ostrich's dance in collaborative innovation networks: Eight lessons for public managers.	Main	-	-
Appendix	Leergedrag van Ambtenaren in Netwerken.  Dutch article.  (Co-author: Lars Dorren, MSc.)	3 & 4	A pretested survey with standardized questions for 12 representatives in combination with an interview with each of the representatives. ERGM used as tool to analyse the data.	Bookchapter

**Table 1: Outline of the dissertation based on the research questions.**

## References

- Agger, A., & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*, doi: 10.1177/1473095216672500.
- Agranoff, R. (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, 66 (special issue), 56-65.
- Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571.
- Ansell, C., & Gash, A. (2012). Stewards, mediators and catalysts: Toward a Model of Collaborative Leadership. *Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-21.
- Ansell, C., & Torfing, J. (2014). *Public Innovation through Collaboration and Design* New York, N.Y.: Routledge.
- Bason, C. (2014). Design attitude as an innovation catalyst. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 209-229). New York, N.Y.: Routledge.
- Beach, D., & Pedersen, R. B. (2013). *Process-tracing methods: Foundations and guidelines*. Ann Arbor, MI: University of Michigan Press.
- Billiet, J., Maddens, B. & Frogner, A.P. (2006). Does Belgium (still) exist? Differences in political culture between Flemings and Walloons. *West European Politics*, 29(5), 912-932.
- Borins, S. (2008). *Innovations in Government – Research, Recognition and Reputation*. Washington, D.C.: Brookings Institution Press
- Brandsen, T., & Pestoff, V. (2006). Co-production, the third sector and the delivery of public services: An introduction. *Public management review*, 8(4), 493-501.
- Burt, R.S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.
- Cheng, M., & Voets, J. (2017). Two decades of metagovernance research : an arm beyond the interactive boundary. *Proceedings of 2017 EGPA Annual Conference*. Presented at the 2017 EGPA (European Group for Public Administration) Annual Conference, EGPA Conference, PSG VI "Governance of Public Sector Organisations."
- Coleman, J.S. (1994). *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Cranmer, S.J., Desmarais, B.A., & Menninga, E.J. (2012). Complex Dependencies in the Alliance Network. *Conflict Management and Peace Studies*, 23(3), 279-313.

- De Vries, H., Tummers, L. & Bekkers, V. (2014). Innovation in the public sector: A systematic review and future research agenda. *Public Administration*, 94(1), 146-166.
- DiMaggio, P.J. & Powell, W.W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160.
- Doberstein, C. (2015). Designing Collaborative Governance Decision-Making in Search of a 'Collaborative Advantage'. *Public Management Review*, 18(6), 819-841.
- Duijn, M. (2009). *Embedded Reflection on Public Policy Innovation; a relativist/pragmatist inquiry into the practice of innovation and knowledge transfer in the WaterINNOvation program*. Dissertation published by Eburon.
- Elmore, R. F. (1979). Backward mapping: Implementation research and policy decisions. *Political Science Quarterly*, 94(4), 601-616.
- FOD M&V. (2000). *Plenaire vergadering dinsdag 17 oktober 2000, Namiddagvergadering, Handelingen*. Accessed March 8, 2016 at: <http://tinyurl.com/hgkgjba>.
- Gaus, A. (2014). *A conceptual framework of (trans governmental) network management*. Paper presented at the 2<sup>nd</sup> WIPCAD Conference. Potsdam, Germany, December 4-6.
- Goodreau, S.M. (2007). Advances in exponential random graph ( $p^*$ ) models applied to a large social network. *Social Networks*, 29(1), 231-248.
- Grabher, G. (2004). Learning in projects, remembering in networks? Communitarity, sociality, and connectivity in project ecologies. *European Urban and Regional studies*, 11(2), 103-123.
- Hartley, J. (2005). Innovation in governance and public services: Past and present. *Public Money and Management*, 25(1), 27-34.
- Hartley, J. (2006). *Innovation and its contribution to improvement: A review for policymakers, policy advisers, managers and researchers*. London, UK.
- Head, B. W. (2008). Assessing network-based collaborations: effectiveness for whom? *Public Management Review*, 10(6), 733-749.
- Huxham, C. (1996). *Creating Collaborative Advantage*. Los Angeles, CA: Sage Publications.
- Huxham, C., & Vangen, S. (2005). *Managing to Collaborate; The Theory and Practice of Collaborative Advantages*. London, United Kingdom: Routledge.
- ICDO. (2000). *Rapporten 2000 van de leden van de Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/jkrct6s>.

- Jessop, B. (2003). Governance and meta-governance: on reflexivity, requisite variety and requisite irony. This is a chapter. In H. P. Bang (eds.). *Governance as social and political communication* (pp. 101-116). Manchester, United Kingdom: Manchester University Press.
- Johnston, E. W., Hicks, D., Nan, N., & Auer, J. C. (2010). Managing the inclusion process in collaborative governance. *Journal of Public Administration Research and Theory*, 21(4), 699-721.
- Kahneman, D. & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of Econometric Society*, 47(2), 263-291.
- Kickert, W. J., Klijn, E. H., & Koppenjan, J. F. (1997). *Managing complex networks: Strategies for the public sector*. Los Angeles, CA: Sage Publications.
- Klijn, E. H., & Koppenjan, J. F. (2006). Institutional design: changing institutional features of networks. *Public Management Review*, 8(1), 141-160.
- Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.
- Kooiman, J. (2003). *Governing as Governance*. Los Angeles, CA: Sage Publications.
- Kraemer, K. L., Andersen, K. V., & Perry, J. L. (1994). Information technology and transitions in the public service: A comparison of Scandinavia and the United States. *International Journal of Public Administration*, 17(10), 1871-1905.
- McGuire, M. (2006). Collaborative public management: Assessing what we know and how we know it. *Public Administration Review*, 66(1), 33-43.
- Meuleman, L. (2008). *Public management and the metagovernance of hierarchies, networks and markets: The feasibility of designing and managing governance style combinations*. Heidelberg, Germany: Physica-Verlag.
- Milward, H. B., & Provan, K. G. (2006). *A Manager's Guide to Choosing and Using Collaborative Networks*. Retrieved from the IBM Center for the Business of Government website: [http://www.srpc.ca/ess2016/summit/Reference\\_9-Milner.pdf](http://www.srpc.ca/ess2016/summit/Reference_9-Milner.pdf).
- Mulgan, G. & Albury, D. (2003). *Innovation in the Public Sector*. Accessed January 3, 2018 at: [http://www.sba.oakland.edu/FACULTY/MATHIESON/MIS524/RESOURCES/READINGS/INNOVATION/INNOVATION\\_IN\\_THE\\_PUBLIC\\_SECTOR.PDF](http://www.sba.oakland.edu/FACULTY/MATHIESON/MIS524/RESOURCES/READINGS/INNOVATION/INNOVATION_IN_THE_PUBLIC_SECTOR.PDF)
- Nauta, F., & Kausbergen, P. (2009). *OECD Literature review. Public sector innovation*. Lectoraat innovatie rapport.
- Ney, S. (2009). *Resolving messy policy problems: Handling conflict in environmental, transport, health and ageing policy*. New York, N.Y.: Routledge.

OECD. (2014). *Innovating the Public Sector; From Ideas to Impact*. Paper presented at the OECD Conference, Paris, France, November 12-13.

Osborne, D. & Gaebler, T. (1992). *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. Reading, MA: Addison-Wesley.

Polsby, N. W. (1984). *Political innovation in America: The politics of policy initiation*. New Haven, CT: Yale University Press.

Potts, J., & Kastle, T. (2014). Public Sector Innovation Research: What's next? *Innovation: Organization and Management*, 12(2): 122-137.

Provan, K. G. & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229-252.

Provan, K. G. & Milward, H.B. (2001). Do Networks Really Work? A Framework for Evaluating Public-Sector Organizational Networks. *Public Administration Review*, 61(4), 414-423.

Rigg, C., & O'Mahony, N. (2013). Frustrations in collaborative working: Insights from institutional theory. *Public Management Review*, 15(1), 83-108.

Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155-169.

Rogers, E.M. (2003). *Diffusion of Innovations*. New York, N.Y.: Free Press.

Rolls, D.A., Sacks-Davis, R., Jenkinson, R., McBryde, E., Pattison, P., Robins, G., & Hellard, M. (2013). Hepatitis C Transmission and Treatment in Contact Networks of People Who Inject Drugs. *PLOS*, doi: [10.1371/journal.pone.0078286](https://doi.org/10.1371/journal.pone.0078286).

Ruimte Vlaanderen. *Procesnota*. Territoriaal Ontwikkelingsprogramma Kustzone.

Scharpf, F. W. (1994). Games real actors could play: positive and negative coordination in embedded negotiations. *Journal of Theoretical Politics*, 6(1), 27-53.

Schumpeter, J. A. (1942). *Capitalism, Socialism & Democracy*. London, United Kingdom: Routledge.

Sørensen, E. (2014). *The Metagovernance of Public Innovation in Governance Networks*. Paper presented at the Policy & Politics Conference, Bristol, UK, September 16-17.

Sørensen, E., & Torfing, J. (2005). The democratic anchorage of governance networks. *Scandinavian Political Studies*, 28(3), 195-218.

Sørensen, E., & Torfing, J. (2007). Introduction Governance Network Research: Towards a Second Generation. This is a chapter. In E. Sørensen and J. Torfing. *Theories of democratic network governance* (pp. 1-21). Basingstoke, United Kingdom: Palgrave-MacMillan.

Sørensen, E., & Torfing, J. (2010). Collaborative Innovation in the Public Sector: an analytical framework. *Ritsumeikan Hogaku*, 330(2), 209-236.

Sørensen, E., & Torfing, J. (2011). Enhancing collaborative innovation in the public sector. *Administration and Society*, 43(8), 842-868.

Sørensen, E., & Torfing, J. (2012). Collaborative Innovation in the Public Sector. *The Innovation Journal: The Public Sector Innovation Journal*, 17(1): 1-14.

Sørensen, E. & Waldorff, S.B. (2014). Collaborative policy innovation: Problems and potential. *The Innovation Journal: The Public Sector Innovation Journal*, 19(3), 1-17.

Sørensen, E. (2016). Political innovations: innovations in political institutions, processes and outputs. *Public Management Review*, 19(1), 1-19.

Stevens, V., & Verhoest, K. (2016a). How to Metagovern Collaborative Networks for the Promotion of Policy Innovations in a Dualistic Federal System?. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-26.

Stevens, V., & Verhoest, K. (2016b). A Next Step in Collaborative Policy Innovation Research: Analysing Interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-20.

Teleford, Q.T., Simpson, S.L., Burdette, J.H., Hayasaka, S., & Laurienti, P. (2011). The Brain as a Complex System: Using Network Science as a Tool for Understanding the Brain. *Brain Connectivity*, 1(4), 295-308.

Termeer, C., & Nooteboom, S. (2014). Innovative leadership through networks. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 170-188). New York, N.Y.: Routledge.

Torfing, J., Peters, B.G., Pierre, J. & Sørensen, E. (2012). *Interactive governance: Advancing the paradigm*. Oxford, United Kingdom: Oxford University Press.

Torfing, J. (2017). *Collaborative Innovation in the Public Sector*. Washington, D.C: Georgetown University Press.

Van Buuren, A., & Loorbach, D. (2009). Policy innovation in isolation? Conditions for policy renewal by transition arenas and pilot projects. *Public Management Review*, 11(3), 375-392.

Vandenabeele, W. (2007). Toward a public administration theory of public service motivation: An institutional approach. *Public management review*, 9(4), 545-556.

Vangen, S., & Huxham, C. (2010). Introducing the theory of collaborative advantage. This is a chapter. In S. P. Osborne (eds.). *The New Public Governance? Emerging Perspectives on the Theory and Practice of Public Governance* (pp. 145-168). London: Routledge.

Vinke-de Kruijf, J., Bressers, H., & Augustijn, D.C.M. (2014). How social learning influences further collaboration: experiences from an international collaborative water project. *Ecology and Society*, 19(2): 40-61.

Voets, J., Verhoest, K., & Molenveld, A. (2015). Coordinating for Integrated Youth Care: The need for smart metagovernance. *Public Management Review*, 17(7), 981-1001.

Vlaamse Regering. *Bisconceptnota Beleidsplan Ruimte Vlaanderen*. VR20152404 DOC.0343/1BIS

Walker, R. M. (2014). Internal and External Antecedents of Process Innovation: A review and extension. *Public Management Review*, 16(1), 21-44.

Zaltman, G., Duncan, R. & Holbek, J.(1973). *Innovations and Organizations*. New York, N.Y.: John Wiley & Sons.



## Chapter 2

# How to Metagovern Collaborative Networks for the Promotion of Policy Innovations in a Dualistic Federal System?

Written by Vidar Stevens and prof. dr. Koen Verhoest

### ABSTRACT

Collaborative networks are increasingly used as vehicles for fostering policy innovations. However, scholars have noted that the extent to which collaborative networks can actually contribute to the development of policy innovations depends on how they are metagoverned. Empirical research on the metagovernance of policy innovation processes in collaborative networks is scarce. Therefore, we review in this article a unique case as a means to add new insights to the causal link between metagovernance, policy innovation, and collaborative networks. Specifically, we examine the efforts of a metagovernor in a collaborative network that operated in the Belgian dualistic federal system.

**Key words:** metagovernance; policy innovation; collaboration; sustainable transport; federalism

**Reference:** Stevens, V. & Verhoest, K. (2016). How to metagovern collaborative networks for the promotion of policy innovations in a dualistic federal system. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-26.

## Introduction

In our contemporary society, policymakers are challenged by increasingly complex policy problems. Issues like global warming, ageing society, and immigration can no longer solely be solved by traditional policy responses, as these daunting problems typically transcend conventional organizational and governmental boundaries in the public sector (Head, 2008). Therefore, many governments have set up collaborative networks to tame these 'cross-cutting' problems (OECD, 2014).

Collaborative networks are, multi-organizational arrangements in which actors work together to solve problems that cannot be solved, or solved easily, by single actors (Agranoff and McGuire, 2003: 4). Hence, the expectation of policymakers is that more concerted and innovative policy solutions will emerge, as more stakeholders and thus more knowledge, resources, and experiences are included in the policy making process (Nambisan, 2008: 11). Innovative policy solutions, or what the literature also calls policy innovations, should be interpreted as policy solutions that are radically different from their predecessors (in terms of policy understanding, policy vision, objectives, strategies and policy instruments). Therefore, conceivably they should be better able to deal with the intertwined policy context of these cross-cutting problems (Sørensen and Waldorff, 2014).

Despite these highflying expectations of policymakers in the innovative capacities of collaborative networks, some scholars argue that the extent to which collaborative networks can actually contribute to the development of policy innovations depends on how they are metagoverned (Montin et al., 2014). Metagovernance is a term used by scholars to denote, the endeavours of a central actor (i.e. the metagovernor) to facilitate collaborative networks, by shaping the conditions under which these networks operate and the involved actors interact with each other (Voets et al., 2015: 983).

According to these scholars, the metagovernance of collaborative networks is necessary as involved organizations may hold different problem perceptions, may be reluctant to collaborate, or may paralyze the innovation process for strategic reasons. Therefore, they have claimed that in order to get a real sense of the value of collaborative networks as vehicles for generating policy innovations, we also need to understand the barriers metagovernors encounter in policy innovation processes that take place in collaborative networks, and how metagovernors can possibly overcome these barriers (Termeer and Nooteboom, 2014).

Empirical research on the metagovernance of policy innovation processes in collaborative networks has, however, remained scarce (Ansell and Torfing, 2014: 238; Sørensen, 2014: 10). This lack of research is striking because it means that we (i.e. the scientific community) do not fully understand how metagovernors can live up to their potential in processes of policy innovation that take place in collaborative networks. As such, in this article we review a unique case as a means to add new insights to the causal link between metagovernance, policy innovation, and collaborative networks. More specifically, we examine the efforts of a metagovernor, who only had limited authority to facilitate the policy innovation process, in a collaborative network that operated in a dualistic federal system.

We advance as follows. The next section briefly summarizes the current state of the art of the literature. Section three elaborates on the aim and approach of this study. Section four discusses the normative framework that we use to examine the practices of the metagovernor. Section five reports the chosen methodology. Section six addresses the policy innovation process and collaborative network the metagovernor had to facilitate. Section seven discusses the results of the case analysis. The final section reflects on the main lessons that can be drawn from this study.

## **Current state of the art of the literature**

Although some refined theories and research exist on collaborative networks (Koppenjan and Klijn, 2004; Agranoff, 2006), policy innovation (Green and Orton, 2011; Mahroum, 2014; Marsh and Edwards, 2009; Morgan, 2010) and metagovernance (Meuleman, 2008; Sørensen and Torfing, 2009), there are limited studies on the metagovernance of policy innovation processes in collaborative networks (Ansell and Torfing, 2014: 238; Sørensen, 2014: 10). Yet, the few contributions that can be distilled from the academic literature have offered detailed accounts of possible strategies that can help metagovernors ensure the promotion of policy innovations in collaborative networks.

Termeer and Nootboom (2014: 180-185), for example, from their research identified numerous metagovernance strategies that are useful for overcoming organizational boundaries<sup>2</sup> and institutional barriers<sup>3</sup> that uphold processes of policy innovation in network settings. To be more specific, building interpersonal trust, providing joint resources, and connecting (i.e. seeking to organize novel linkages between domains and organizations) were mentioned as metagovernance strategies to deal with competitive formal relationships in networks (Termeer and Nootboom, 2014: 181-182). Further, keying (e.g. rearrangement of existing routines and procedures), issue-selling or sense-making (e.g. attracting stakeholders by telling them how important the innovation is), and integrating (e.g. incorporating innovation processes in the formal political-administrative structures) were considered beneficial metagovernance practices to avoid innovation processes becoming bogged down in existing policies and procedures (Termeer and Nootboom, 2014: 182-183).

In similar vein, Bason (2014: 216-225) discussed four design attitudes metagovernors should consider when managing innovation challenges and opportunities in collaborative networks. These four design attitudes are: questioning assumptions, centering on outcomes, stewarding the unknown, and concretizing the future. Bason writes:

...in the case studies the network managers used rather similar approaches to innovation and change; they explored the characteristics, dynamics and boundaries of the problem at hand and tried to challenge the premises of each of the involved actors ('questioning assumptions'), they kept the focus on the intended change in the innovation process ('centering on outcomes'), they managed the discomfort actors experienced in surrendering to the 'unknowns' of the innovation process, i.e. to embrace discontinuity and the break from the past ('stewarding the unknown'), and

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<sup>2</sup> Contrasting organizational functions, lack of trust, no formal relationship between actors, etc.

<sup>3</sup> Fixed rules, strict procedures, lack of political support, etc.

they continuously made and shaped the future state of affairs so concretely that you can see it, vision it, and sometimes even touch it ('concretizing the future').

Also, Doberstein (2015: 17-19) considered several features of management that enable the emergence of policy innovations in collaborative networks. Doberstein, inter alia, argued that metagovernance that is too restrictive and hierarchical will give rise to resistance and conflict, stifle policy innovation and reduce the willingness of policy actors to invest themselves in joint problem-solving, whereas metagovernance that is too flexible can easily lead to governance chaos and eventually failure.

Several of the findings of these earlier studies are also quite contradictory to each other. A good example is a finding of Bason (2014: 220) in comparison to an outcome of the study of Keast and Waterhouse (2014: 166). According to Bason, distortive metagovernance strategies (e.g. putting or even forcing organizations beyond their usual comfort zone) act as catalysts for creativity and innovation in collaborative networks. Keast and Waterhouse, on the other hand, argue that integrative strategies, which are about encouraging and stimulating the genuine sharing of information among actors without any form of coercion, are most beneficial to spur idea generation in processes of policy innovation.

An issue of concern to many of these studies, however, is the generalizability of the obtained findings. In point of fact, most scholars used the case study method to generate their research findings. The merits of case study research are that more accurate data and detailed information about real-life situations can be retained for analysis compared to many other research methods. Yet, due to the small-N problem only context-dependent generalizations can be made (Gerring, 2007). Hence, Sørensen (2014: 10) has argued that more empirical research is required that focusses on different innovation- and governance dynamics in collaborative networks, in order to get a full sense of what strategies metagovernors most optimally use under specific institutional conditions to facilitate collaborative networks for the promotion of policy innovations.

## **The aim and approach of this study**

Considering the selected previous studies, we noticed that the focus of scholars has primarily been on the policy innovation dynamics and the practices of a metagovernor in collaborative networks that operate at the subnational and the local level, or the multilevel dynamics between these tiers of government. Termeer and Nooteboom (2014: 177), for example, inter alia studied the metagovernance of sustainable innovations in agricultural policies in the Venlo region in the Netherlands, whereas Agger and Sørensen (2014: 191) zoomed in on the metagovernance of a collaborative policy innovation process in the Danish municipality of Albertslund. Moreover, in many of these studies the metagovernor had a strong and influential position in the actor constellation, which made it easier to facilitate the policy innovation process (Montin et al., 2014: 117; Termeer and Nooteboom, 2014: 175; Agger and Sørensen, 2014: 205).

Against this background, we intend to contribute to existing body of knowledge by examining the efforts of a metagovernor who had only limited authority to promote the policy innovation process in a collaborative network that consisted of a multitude of actors from both the

federal and regional level of government. Specifically, we look at the efforts of the Federal Department of Transport and Mobility (FOD M&V), as an acclaimed metagovernor, to facilitate the establishment of a National Plan for Sustainable Transport (NPST) – i.e. a policy innovation for sustainable transport – in a collaborative network that operated in the Belgian federal state.

The Belgian federal state offers a unique context to study (Yin, 2009: 48), as it is particularly known for its dualistic federal structure (Billiet et al., 2006: 3). Dual federalism, also referred to as divided sovereignty, implies that power and authority is divided between the federal government and the regional governments in clearly defined terms, with regional governments exercising the powers accorded to them without interference from the federal actors (Deschouwer, 2006). This means that there is no specific hierarchy among the levels of government in a dualistic federal system, as the regional competencies have the same legal value as the federal competencies.

With regard to the competence division in the Belgian transport domain, the three regional administrations (Flanders, Wallonia, and the Brussels Community) have over the years acquired the full competencies for issues regarding inland navigation and road transport within their separate territories, while the position of the federal administration has rapidly been hollowed out. The federal administration has only remained responsible for (a few) matters of rail transport (ICDO, 1998: 125). Hence, the federal department FOD M&V was a relatively small actor tasked with safeguarding the generation of a policy innovation for sustainable transport in a collaborative network, wherein the actors from the different administrations were more accustomed to working in isolation than working together.

Eventually, the actors in the collaborative network did not succeed in aligning their self-given aims in the pursuit for one common goal: making the entire transport sector more sustainable. Therefore, the FOD M&V decided in 2010, after thirteen years, to pull the plug on the policy innovation process in the collaborative network. As such, we raise the following two questions:

1. Why were the metagovernance efforts of the FOD M&V not sufficient to safeguard the generation of a policy innovation for sustainable transport in the collaborative network?
2. And what lessons can we learn from the metagovernance deficiencies of the FOD M&V in terms of how context influences the appropriateness of metagovernance strategies?

In order to answer these questions, we compare the metagovernance efforts of the FOD M&V to a normative framework. This normative framework captures the salient goals a metagovernor has to adhere to in order to sustain the collaborative network in which it participates. The discrepancies between the impacts of the efforts of the metagovernor on the collaborative network's policy innovation process and the normative standards allow us to discern why the FOD M&V was unable to ensure the establishment of the policy innovation for sustainable transport in the collaborative network. On basis of these outcomes, we are able to draw some general lessons about how a metagovernor, who has limited authority, can

most optimally facilitate processes of policy innovation in collaborative networks that operate in complex institutional contexts, such as dualistic federal systems.

## Normative framework

Within the academic literature, different salient goals have been mentioned by scholars to which a metagovernor has to adhere in order to ‘successfully’ facilitate collaborative networks (see Provan and Kenis, 2008; Koppenjan and Klijn, 2004; Coleman, 1990; DiMaggio and Powell, 1983). Alexander Gaus (2014) has devoted a paper to the different conceptualizations of these salient goals and has clustered them in what he calls the network management triangle<sup>4</sup> (figure 1).

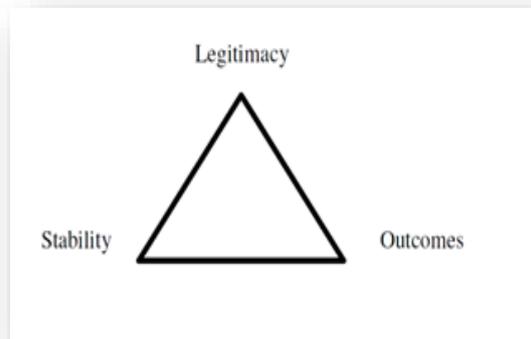


Figure 1: Network Management Triangle.

In this article, we do not use the triangle for theoretical purposes but rather as an normative framework to examine whether the FOD M&V was able to comply with all of the salient goals, and if not, investigate what restrained the metagovernor from reaching them. In this way, we can gain a comprehensive notion of why the metagovernance strategies and practices of the FOD M&V were not sufficient to safeguard the generation of the policy innovation for sustainable transport in the collaborative network. First, we elaborate on the meaning of each of the salient goals and determine what normative standards can be deduced from the triangle.

### The metagovernor’s goal of stability

Stability, which entails creating a situation where collaboration can flourish, is the first vertex of the network management triangle. Gaus (2014: 12) writes that the salient goal of stability encompasses four different aspects.

First of all, stability relates to resilient and close connections between involved actors. Social network analysis has introduced a number of metrics, such as network density and connectivity, which are measures for the scale of connections among network members and their robustness. In this branch of research, dense networks are credited with a faster flow and better utilization of information (Coleman, 1990). Further, networks with high connectivity have brokers and boundary spanners that are able to bridge missing connections among members (i.e. structural holes) and facilitate the link between the network and its environment (Burt, 1992). One of the sub goals for the metagovernor is, therefore, to strengthen the (non-)existing relationships between the actors in the collaborative network (Gaus, 2014: 12).

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<sup>4</sup> We build in this paper on a strand of the metagovernance literature which views the concept as the management of (self-steering) collaborative networks (Voets et al., 2015). Due to this definition of ‘metagovernance’, we are of the opinion that the terms of ‘network management’ and ‘the metagovernance (of self-steering networks)’ can be used interchangeably, and thereby the network management triangle can also be used to examine the metagovernance practices of the FOD M&V.

Second, stability is about establishing shared goals and a common understanding of the overall purpose of working together. The absence of a common mission and vision is often considered an impediment to successful policy innovation (Bommert, 2010) as it leaves room for free-riding behaviour. As such, the metagovernor should ensure socializations (i.e. an open exchange of views, concerns and interests) in the collaborative network as a means to overcome problems of collective action (Gaus, 2014: 13). Third, the metagovernor must ensure that actors in the collaborative network consider and establish clear rules of the game to constrain self-interested actor behaviour (North, 1990). These can include rules about decision-making, information sharing, process steps, etc. (Koppenjan and Klijn, 2004). Gaus (2014: 13) calls this the institutionalization of the collaborative network. The fourth and final aspect of stability refers to high levels of trust (Gaus, 2014), which can be affected by purposive conflict management (Koppenjan and Klijn, 2004). Ultimately, the metagovernor makes sure that conflicts are mitigated and that trust is fostered among involved actors (Oliver, 1991).

### **The metagovernor's goal of legitimacy**

Legitimacy is the second vertex of the network management triangle. Legitimacy can be broadly defined as 'a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (Suchman, 1995: 574). Only a few studies have elaborated on the issue of legitimacy at the network level (Provan and Kenis, 2008). These scholars argue that the legitimacy of such collaborations exists at two levels: internal and external legitimacy. This means that a metagovernor must ensure that both the involved actors (i.e. the insiders) as well as the network's environment (i.e. the outsiders) perceive the actions of the collaborative network as appropriate.

At the internal level this requires a convergence of views around desirable network outcomes and the most suitable approaches and processes for achieving these outcomes (Gaus, 2014: 14). This view of legitimacy, according to Driori and Honig (2013: 347), highlights the importance of authority and governance and has its origins in the Weberian notion of legitimacy as a conscious acceptance of certain behaviours and beliefs by social actors. Hence, the task of the metagovernor is to support such a convergence among potentially disparate network members using appropriate management strategies. Externally, the metagovernor has to make sure that the collaboration demonstrates its legitimacy and value outside of the actors' constellation by conforming to the expectations and attached norms of organizations, citizens' groups, organizational fields, transnational institutions, etc. (DiMaggio and Powell, 1983: 150-151).

### **The metagovernor's goal of outcomes**

The vertex of outcomes is about efficiently generating concrete and effective results attributable to the collaboration (Gaus, 2014: 16). As it simply refers to the production of results, outcomes may be perceived as the most tangible of the three salient vertexes. Yet, 'goal attainment' in a collaborative network is much harder to achieve than one might think (Provan and Milward, 2001).

In fact, decisions made in multi-organizational arrangements are often prone to subjective interpretations (Kahneman and Tversky, 1979). This means that every involved actor will make

a cost-benefit calculation with which they balance the relevance of the arrangement's activities and corresponding payoffs to their self-given aims. Actors are likely to collaborate as long as this assessment demonstrates that it is in their best interest to participate. If the assessment turns out negative, the actors will presumably no longer take part in the joint venture. As such, the salient goal of outcomes asserts that the metagovernor must be able to assure that all interests are included and treated with the same value and respect in the collaborative network. Simultaneously, the metagovernor has to safeguard the continuity of the (innovation) process because setbacks will have an immediate effect on the actors' cost-benefit calculation when they value the usefulness of the collaboration (Gaus, 2014: 16).

**The confluence of the metagovernor's salient goals**

The triangle does not imply a hierarchy among the three salient goals and corresponding sub goals. All goals are equally important in facilitating collaborative network processes. Based on the network management triangle insights, we defined the normative standards to which we compare the practices of the FOD M&V in section 5. Table 2 offers an overview of these normative standards. Now we turn to the methodological section.

<b>Vertex:</b>	<b>Sub goal</b>	<b>The metagovernor's actions must result in...</b>
<b>Stability</b>	<i>Connectivity</i>	a strengthening of relationships between all actors.
	<i>Socialization</i>	an open exchange of views, concerns, and interests between actors.
	<i>Institutionalization</i>	the establishment, support, and consideration of shared 'rules of the game'.
	<i>Conflict management</i>	a mitigation of existing tensions and the fostering of trust.
<b>Legitimacy</b>	<i>Internal legitimacy</i>	a shared internal appreciation for the way 'integration' is sought.
	<i>External legitimacy</i>	a confirmation of the collaboration to all outside norms and expectations.
<b>Outcomes</b>	<i>Goal attainment</i>	the 'efficient' generation of a 'shared' agreement.

Table 2: Normative standards to compare to the metagovernance practices of the FOD M&V.

**Methodology**

We used a case study methodology to study the attempts of the FOD M&V, from 1997-2010, to facilitate the establishment of the NPST in a collaborative network. This network included a multitude of actors from federal and regional levels of government. We acknowledge the inherent limitations of using single case studies for extrapolating findings, as was described by George and Bennett (2005). Yet, we also agree with Flyvbjerg (2011: 305) when he argues that a case study can further scientific development by the force of example. To this end, we do not pretend that our findings are fully generalizable or highly theoretical. However, we are convinced that our reflections are helpful in substantiating the development of theory on the impact of metagovernance on the innovative capacity of collaborative networks.

For the data collection we drew on a detailed process mapping based on an analysis of documents and a series of interviews (Koppenjan and Klijn, 2004: 136-137). The document analysis included parliamentary and policy documents, meeting minutes, position papers, FOD M&V annual reports, and long-term policy plans of other organizations involved. The relevance of the documents was determined by making a selection based on whether the

information in the documents said something new or extra about: the different stagnations and breakthroughs of the policy innovation process, the various activities of the metagovernor, the positions of the actors with regard to the problem situation and possible solutions, and the morphology of the actor constellation. The document analysis was complete once we reached data saturation.

Subsequently, the interviews helped us gain more insight into the behaviours, ideas, attitudes, and experiences of the actors with regard to the development of the policy innovation process. The interviews were semi-structured and the questions concentrated on the key events that followed from the document analysis. In total, we interviewed seven high-ranking policy officials. Five of the respondents worked for the FOD M&V. This allowed us to capture the metagovernor's view on the innovation dynamics in the collaborative network and discuss its metagoverning efforts in detail. In the FOD M&V respondent interviews we noticed that the Flemish region VMMOW department (see Table 3) was especially opposed the actions of the FOD M&V. As such, we made the decision to also interview two relevant officials of this Flemish department.

The interviews typically lasted for 1.5 hours. Each interview was recorded and transcribed. We promised our respondents anonymity. Therefore, we numbered the interviews and used the phrase 'respondent (number)' to report quotes from the interviews in this article. We were aware of the possibility that memory errors<sup>5</sup> could prevail in the interviews, given that the process started more than 18 years ago (Tourangeau, 2000). Therefore, in order to minimize the impact of (possible) memory errors, we made two deliberate choices. First of all, we only selected respondents<sup>6</sup> that had been key figures in the policy innovation process or were known for their expertise on the policy developments of the different modes of transport during the period of 1997-2010. In this way, we expected that we would collect more accurate data than if we had interviewed respondents that were not, or only partly, involved in the collaborative network. Secondly, we triangulated the data by comparing the interview responses to each other and to the document analysis findings. We followed-up with respondents if we ran into inconsistencies to ask for clarification.

Eventually, we used the normative standards of the network management triangle as grounding concepts to reflect on the process mapping. This allowed us to gain a notion of if, during the policy innovation, the FOD M&V was able to live up to these normative standards, and if not, why the metagovernor was unable to do so. Finally, we organized a stakeholder meeting with 25 end-users<sup>7</sup> of transport policies to see whether they recognized our reflections on the policy innovation dynamics from their past interactions with involved governmental actors. This stakeholder meeting allowed us to cross-validate our findings. The results of the performance of the FOD M&V in comparison to the normative standards of the network management triangle are presented in section seven. Before we do so, section six elaborates on the policy innovation process and collaborative network the FOD M&V had to metagovern.

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<sup>5</sup> There are different sorts of memory error. Respondents can, for instance, 'forget things' or reinterpret aspects of the case differently when reflecting back on the case dynamics.

<sup>6</sup> Only seven respondents could be selected on basis of these (strict) selection criteria.

<sup>7</sup> Shipping companies, transport companies, harbours, railway companies, steel companies, etc.

## The case

During the late 1990s politicians in the Belgian federal state began to realize that their transport policy strategies were no longer compatible with the sectorial context (ICDO, 2000: 437). As a result, in 1997, a multitude of political actors from different tiers of government (federal and regional level) agreed to come up with a National Plan on Sustainable Transport (NPST). The NPST would radically alter the objectives, strategies, and policy visions underlying the conventional governmental actions and interventions (ICDO, 1998). The envisioned policy change proposed a shift of more than 15 per cent of the transported freight from the roads to railways and inland waterways by 2010. These modes of transport were considered to be more sustainable, environmentally-friendly, and much underused with respect to their capacity (ICDO, 2000). Moreover, the politicians wanted to invest in intermodal forms of transport instead of continuing to focus on the development of a single mode of transport (ICDO, 1998).

It was decided that relevant departments and agencies (i.e. administrative actors) from the different tiers of government would collaborate to concretize the policy actions for the NPST and ensure that joined strategies were developed. These were not only departments and agencies that were directly involved in the transport domain (FPDO, 2000: 76), but also entities that had an interest in the development of transport policies (from the policy fields of environment, spatial planning, and economic affairs) or which were necessary for the execution of agreed policy actions (from the policy field of finance). The FOD M&V was assigned as metagovernor. The department was therefore not only a participant but also responsible for the advancement of the policy innovation process in the collaborative network. Table 3 provides an overview of all involved administrative actors (and their abbreviations) clustered according to the administrations and the policy field to which they belong. The actors with an asterisk after their abbreviation are semi-autonomous organizations.

However, the joining up of administrative actors in the collaborative network, was not an easy exercise. The administrative actors did not manage to agree on a holistic and innovative government strategy that would encompass the different levels of government. Therefore, in 2010 the FOD M&V made the decision to terminate the collaborative network. The policy innovation process burnout was seen as early as 2005, when each of the regional administrations decided it was in their best interest to devote less attention to the NPST and instead work on their own innovative policy strategies for sustainable and intermodal transport (ICDO, 2004: 197). As such, in our data analysis we paid particular attention to the metagovernance dynamics between 1997 and 2005.

	<b>Department of Mobility</b>	<b>Department of Spatial Planning and Environment</b>	<b>Department of Economic affairs</b>	<b>Department of Finance</b>
<b>Federal administration</b>	FOD M&V Infrabel* (rail infrastructure manager) NMBS* (Belgian Railway Company)	FOD VVL	FOD EKME	FOD FIN
<b>Flemish administration</b>	VMMOW	VMRWO and VMLNE	VMEWI	VMFB
<b>Walloon administration</b>	WDGMOB	WDGSP and WDGENV	WDGECO	WDGF
<b>Brussels administration</b>	BRM	BRSO	BREW	BRBF

**Table 3: Involved administrative actors in the collaborative network.**

## The case results

In the following section, the results of the data analysis process are presented. We start by presenting the results of the performance of the FOD M&V in comparison to the sub goal of connectivity.

### Connectivity

The sub goal of connectivity considers, as earlier indicated, the relationships between the collaborative network actors. Ultimately, the metagovernor's role is to ensure that there are close connections between the actors involved, as this allows for a more efficient and transparent way of working together. In the case, however, developing strong ties was rather difficult for the FOD M&V to achieve. Developing strong ties with the affected regional departments and agencies proved to be a particular challenge (FRDO, 2004: 24). There were two reasons for this.

First of all, the FOD M&V had the overall tendency to routinely interact and engage with its network of federal actors, and expected only reaching out to the regional departments of Transport and Mobility to be sufficient to obtain the full support of the regional administrations for the policy innovation (ICDO, 2001: 46; FRDO, 2004: 24). The metagovernor thus viewed the BRM, VMMOW and WDGMOB as carrier pigeons of their regional administrations, and did as such little effort to include more regional parties in the structural deliberations on the NPST. The main reason was that the FOD M&V was afraid that too many stakeholders around the innovation table would reduce the effectiveness of the collaborative network in terms of quickly finding a policy solution for the promotion of sustainable transport (ICDO, 1997).

Second, the regional administrations themselves did not make a real effort to become more involved in the collaborative network (ICDO, 2000: 9). The regional administrations only wanted to join the dialogues when there were opportunities to reap the benefits from the collaboration. In point of fact, the BRM, VMMOW, and WDGMOB mainly used the policy innovation process to advocate the need for a new state reform discussion in the transport domain (respondent 2). These departments argued that a sustainable transition in the

transport domain could only be achieved if competences of rail transport were transferred to the regional levels (Vlaamse Regering, 1996: 39). In this way, the regional actors strived for full authority over the development of all modes of transport within their responsible territory.

### **Socialization**

The relatively weak ties between the federal and regional administrations also had an immediate effect on the socializations within the collaborative network. While the actors within each of the administrations attempted to get a shared understanding of the policy problem and possible solutions, the dialogues transcending the governmental levels were mere discussions on conflicting policy priorities (FRDO, 2004: 6).

The Walloon departments, for example, agreed in 1999 to support the ambition to make transport more sustainable, but not at all costs. The structurally poor economic performance of the region made the Walloon government focus on mere economic revival. Too many obligations towards the goal for sustainable transport would then only reduce the possibility of maintaining an economic focus in relation to issues of transport and infrastructure (Happearts, 2011). The federal departments and agencies, in contrast, adhered to the opinion that each of the actors in the collaborative network had to go the extra mile for sustainable transport (respondent 5). In consequence, there were numerous disputes between the WDGMOB and the federal departments with regard to the ambition level of the envisioned transition (FOD M&V, 1999: 100).

If we specifically consider the metagovernance actions of the FOD M&V in relation to the sub goal of socialization, a 2004-progress report suggests that it would have been better if the FOD M&V had given more direction to the deliberations in the collaborative network, instead of relying too much on the self-governing capacity of the actor constellation (FRDO, 2004: 41). In fact, the metagovernor mainly influenced the operative conditions of the interactions (when and in what constellation the actors would meet) but left it up to the actors themselves to discuss and overcome substantive differences with regard to the generation of the policy innovation (ICDO, 2001). The involved actors, however, did not really take any initiative to achieve greater coherence (FRDO, 2004: 23). According to minutes of a meeting that took place in January 1999, “departments and agencies rather used the (clear) delineation of authority as an alibi to not discuss issues that were harmful for their organizational and administrative interests.”

Arguably, the FOD M&V was in a difficult position to stimulate the actors from the different administrative levels to give up on their positions. The metagovernor had to balance two opposites. On the one hand, the FOD M&V wanted to look after its own interests in its role as collaboration network participant. On the other hand, in its role as metagovernor, the FOD M&V had to prevent the other organizations from perceiving its interventions as favouring certain interests over others.

To this end, the departments and agencies in the collaborative network did not really get into a dialogue on the requirement that if they were serious about enabling a sustainable transition in the entire transport sector, they had to get in same boat and start rowing together (FRDO, 2004: 23).

## **Institutionalization**

With regard to the sub goal of institutionalization – which is about making sure that the metagovernor sees that rules of the game are established, supported, and considered by all actors – the FOD M&V did more harm than good by unilaterally deciding what procedures were to be followed and how the decision-making would be organized. The negative effects of these metagovernance actions became particularly evident in a first stage of the policy innovation process. The metagovernor had promised the political actors that an agreement on the NPST would be reached by January, 2000 (FRDO, 2004: 15). In order to comply with this deadline, the metagovernor made the decision to first ensure that the departments and agencies at the federal level reached consensus before the BRM, VMMOW and WDGMOB were to be consulted on the content of the document in five roundtable meetings (ICDO, 1998: 128).

This procedure was, however, not very fruitful. By the beginning of 2000, the FOD M&V was merely able to send a small document to the political actors. The document included neither concrete policy actions nor did it go into detail on the allocation of resources and coordination mechanisms for ensuring the implementation of the NPST. The metagovernor wrote in the document that there were some nuanced differences between the regional and federal administrations, and therefore the FOD M&V was unable to deliver what was promised (FPDO, 2000: 76). Hence, the FOD M&V requested more time for the innovation process in order to not disrupt the fragile collaboration on the NPST between the federal and regional departments and agencies.

According to respondent 2, however, there was another main reason why no agreement was reached on the NPST at the initial deadline: the regional departments and agencies had the feeling that due to the procedures and decision-making rules there was little room for them to raise their concerns in the collaborative network. Consequently, they insisted that the FOD M&V change its dominating way of metagoverning. Or as respondent 2 mentioned, “the regional departments and agencies no longer wanted a federal stepmother that did not treat them as equals in the collaborative network.”

## **Conflict management**

In terms of conflict management, initially, the FOD M&V did not undertake specific action to mitigate tensions and foster trust among the actors in the collaborative network. The metagovernor simply thought that every administrative actor acknowledged the need and urgency for establishing the NPST and therefore expected that these actors would be pragmatic about finding a common solution for the sustainable transition (FOD M&V, 1999: 7-8). However, after failing to reach the first deadline the metagovernor realized that a lot of dissatisfaction existed, particularly among the regional actors, with regard to the procedures in the collaborative network and the course of the policy innovation process. Hence, the FOD M&V wanted to make amends with the regional departments and agencies in order to take some pressure of the collaboration. Specifically, the metagovernor utilized two metagovernance strategies.

First of all, the metagovernor tried to re-engage with the regional administrations by providing the regional carrier pigeons with a bigger role in the deliberations (ICDO, 2001: 26). This meant that the BRM, VMMOW and WDGMOB became more directly involved in the policy innovation

process, instead of only being consulted after a federal agreement was reached. Secondly, the FOD M&V decided to split the deliberations on the NPST up into smaller games and subsequently try to reach an agreement on greening rail transport first (ICDO, 2002; respondent 3). The FOD M&V realized that the regional administrations wanted to have more control over the development of rail transport specifically. As such, the FOD M&V hoped to regain the trust of the regional departments and agencies by organizing the deliberations in the policy innovation process according to these specific wishes and demands (respondent 3).

The metagovernor presumably expected that these mitigating efforts would be sufficient to get the involved actors on the same wavelength for the sustainable transition. In the new planning, the deadline for agreeing on the NPST was postponed to August, 2001. The NPST was, however, not yet adopted by the beginning of 2002. In fact, the promise to agree on the policy innovation remained a dead letter. The involved actors were not very willing, or had a lot of difficulty, adapting to the novel situation where they were supposed to work together to achieve mutually beneficial solutions (FRDO, 2004: 23). For that reason, a member of the stakeholder meeting, which we organized to cross-validate our research findings, made the suggestion that it would have been better if the FOD M&V had not only responded to conflicts, but also had tried to proactively manage the discomfort the actors experienced with working together on concerted innovative policy strategies.

### **Internal legitimacy**

The FOD M&V wanted to avoid actors in the collaborative network feeling disadvantaged by its metagoverning efforts (FRDO, 2004: 25). Nonetheless, we already discussed several examples where especially the regional departments and agencies perceived the actions of the metagovernor as being off base. In terms of the sub goal of internal legitimacy, this meant that sometimes the FOD M&V was unable to find appropriate ways of steering for integrated policy action. However, the position of the metagovernor was not challenged in any of the earlier encounters.

This changed after the FOD M&V decided in 2002 to flutter the dovescotes and make a draft document for the NPST on the basis of measures that were still being discussed but for which there seemed to be some general consensus (FOD M&V, 2000: 19; ICDO, 2000: 29). The FOD M&V hoped that this draft document would work as an incentive for the departments and agencies involved to bring the deliberations on the NPST to a good end. Yet, the regional actors interpreted the good intentions of the FOD M&V as a form of paternalistic behaviour (respondent 2). According to them, the metagovernor was overstepping its mandate by making decisions on issues that neither fell within the breadth of the competencies of the FOD M&V nor the competences of other federal departments.

As a result, the metagovernor's mandate became an area of conflict in the collaborative network. The big question in this conflict was in what situations was the FOD M&V allowed to ignore ongoing discussions and struggles for the safeguarding the continuity of the policy innovation process. The conflict was solved when, in the beginning of 2004, the actors agreed on four principles to which the metagovernor henceforth had to adhere (FRDO, 2004). These were the principles of complementarity, interaction, added value, and synergy (IMCDO, 2005: 3). Specifically, this meant that the FOD M&V, in its role as metagovernor, was only allowed to resolve trench-wars in the collaborative network when the solutions the metagovernor

offered: aligned with the policy objectives of all involved actors (i.e. complementarity), took into account the existing competence division (i.e. interaction), were an improvement of operational policy strategies (i.e. added value), and contributed to the goal of creating an innovative and holistic government strategy for the transport domain (i.e. synergy).

### **External legitimacy**

The demand for restricting the FOD M&V's metagovernance behaviour was not only fuelled by issues related to the internal legitimacy sub goal, but also by the little acknowledgement the FOD M&V had with respect to other external obligations than its own. The FOD M&V was foremost responsive to the commitments of Belgium towards the 1992 Rio Protocol. The Rio Protocol urged the signers of the treaty to make their freight transport more sustainable by the year 2010. Moreover, the Rio Protocol outlined a long list of objectives to which the signers of the treaty had to conform. To this end, the FOD M&V wanted to use the deliberations on the NPST to also comply with these international expectations.

The collaborative network was, however, not an entity in its own right. Rather, it was a collaboration of departments and agencies that felt the need to work together. In practice, each of the participating actors also had to deal with their own external stakeholders. Within the deliberations on the NPST there was little room to talk about other external demands than the objectives of the Rio Protocol. As such, there were some fierce struggles about measures that may have been effective ways to conform to the objectives of the Rio Protocol, but at the same time would harm the interests of the involved departments and agencies' stakeholders.

A good example of such a struggle was the discussion on fiscal measures directed at burdening the road haulage system. According to the FOD M&V, this measure would make companies more aware of the negative effects of their transport activities and stimulate them to use more green modes of transport (Blauwens and Thiry, 1998: 64). The VMMOW, however, heavily opposed this idea of taxing road transport. According to respondent 6 and 7:

...the ports are important for the Flemish economy. Companies in the port areas want to get their products as quickly as possible to the hinterland. The fastest way to do so is by road transport. To transport them by inland navigation or rails is not a real solution as only minimum infrastructure capacity exists. Financial measures directed against the use of road transport can thus harm the economic position of the Flemish ports, as companies will probably move to other ports to unload their goods.

Eventually, the measure became a taboo topic in the collaborative network (FPDO, 2000). In terms of the external legitimacy sub goal this means that the FOD M&V, in its endeavours, was unable to ensure that the collaboration conformed to all outside norms and expectations.

### **Goal attainment**

In reference to the normative requirements of the goal attainment sub goal, we can state that the actions of the FOD M&V were inadequate to assure the efficient generation of a shared agreement. In point of fact, in 2005 each of the regional administrations decided to merely focus on their own intermodal and sustainable freight transport plans and spend less time on the generation of the policy innovation (ICDO, 2004: 197). There is one last shortcoming of

the FOD M&V that contributed to this negative process outcome: the ambition of the metagovernor to attain an innovative policy solution as quickly as possible.

The FOD M&V literally stated in its 1997-annual report that it wanted to secure a quick win. The FOD M&V, however, did not realize that the only certainty involved actors had upfront was that the policy innovation was meant to be a game-changer<sup>8</sup>. It seems, in this sense, logical that most participants were hesitant and prudent to immediately concentrate their efforts on agreeing to a radical new policy solution, as they did not know exactly how the policy innovation would eventually affect their organizational practices. This was evident in a 2004-progress report which stated that it would help if the FOD M&V, in its catalytic role, takes more time to provide transparent communications and promote shared ownership among the actors (FRDO, 2004: 23). In this way, it was expected that the involved departments and agencies could be stimulated to move beyond probing each other and instead progress towards the mutual development of new ideas and solutions for the cross-cutting policy issue of sustainable transport.

## Conclusion

To conclude, research on the metagovernance of processes of policy innovation in collaborative networks has so far been quite scarce. Therefore, in this article we decided to examine a case with unique features as a means to add new insights to the causal link between metagovernance, collaborative networks, and policy innovation. What was specifically unique about this case was that the collaborative network operated in an institutionally complex context with clearly delineated powers and responsibilities between the involved actors from the different administrations. Further, the metagovernor only had limited authority to facilitate the policy innovation process. Hence, our final reflections mainly apply to cases with similar specificities.

Overall, we can state that the performance of the FOD M&V was not very successful (see appendix). Of course, the FOD M&V is not the only actor to blame for the policy innovation failure. Among other reasons, the reluctance of the regional departments and agencies to fully participate also contributed to the negative process outcome. Yet, from a managerial point of view the claim can be made that some metagovernance actions and strategies of the FOD M&V were not advantageous given the innovation- and governance dynamics in which the collaboration took place. On the basis of these metagovernance deficiencies, we draw some general lessons about what metagovernance strategies are most appropriate to facilitate policy innovation processes in complex institutional contexts, such as dualistic federal systems.

A first lesson that follows from the empirical analysis is that a metagovernor, who facilitates policy innovation processes in dualistic federal systems, should be cautious with ignoring the existing competence division in the collaborative network and overstepping its given mandate. In this case, it seemed as if the actors from the different administrations viewed their competencies as sacred, and perceived anyone who overlooked these as invaders. In fact, a general response of many of the regional actors was that the FOD M&V and other

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<sup>8</sup> Remember the radical policy objectives that were envisioned by the political actors by establishing the NPST.

federal actors were not allowed to intrude in their conduct of business without any consent. Moreover, we saw that the position of the FOD M&V became a conflict issue in the collaborative network – and eventually the behaviour of the metagovernor was constrained – after the department decided without any notification to make a draft document of the NPST in the hope of resolving tensions in the collaborative network and overcoming a social impasse in the deliberations on the policy innovation.

As such, we argue that the extent to which a metagovernor is consciously aware of the boundaries of its own position and is capable of keeping its operations within the breadth of its given mandate, in large part determine how ‘innovative’ collaborative networks that operate in dualistic federal systems will be.

This first lesson is quite contradictory to the findings of Montin et al. (2014: 117). These scholars elaborate in their article on an effective strategy the metagovernor utilized in one of their cases to spur the development of a policy innovation in the collaborative network. Specifically, the metagovernor decided to neglect the power positions in the collaborative network and take on the role of preacher, by telling the involved actors how they should think and respond to each other in order to construct a unanimous approach to regional development. According to Montin et al. (2014: 117), “this preaching strategy injected some fresh energy in the deliberations and eventually became a significant trajectory element to get the work moving to the next stage of the policy innovation process.”

We doubt, however, that such a preaching strategy would have been appreciated by the actors in our case. In fact, we expect that the stakeholders would perceive such behaviour as pedantic or even arrogant. Especially considering the limited authority the FOD M&V had in the collaborative network. In addition, it seems unlikely that the FOD M&V would even consider such a metagovernance approach, as the department tried to avoid having its metagovernance actions limit its possibilities, as participant, to influence the deliberations on the policy innovation.

As such, we rather agree with Agger and Sørensen (2014: 206) when they argue that a metagovernor should not do everything in its power to steer and depoliticize the innovation process. Instead they should focus on the design and maintenance of policy arenas that are ‘safe-spaces’ where, in a friendly atmosphere, contestation can take place among the actors on the policy innovation. According to Agger and Sørensen (2014: 206) “a skilful staging and processing of political contestations in these safe-spaces can even transform conflicts among actors in the collaborative network from barriers into drivers for collaborative policy innovation.”

A second lesson that follows from our case study is that it takes time before actors are willing, and most of all, prepared to join forces in policy innovation processes. We observed quite a bit of hesitance among many departments and agencies to collaborate for the NPST. These organizations did not know exactly what to expect. The only certainty they had upfront was that the policy innovation was meant to be a game-changer and radically alter the way in which the policy problem would be addressed. Therefore, we advise metagovernors not to immediately press for results, but instead to first clearly manage expectations and establish a strong foundation of mutual trust. In this way, we expect that the actors in the collaboration

can really establish a situation in which they work together on the development of innovative policy solutions.

When the departments and agencies get to this next level, the metagovernor must avoid the involved actors remaining as mere passive actors, as was the case in the deliberations on the NPST. At the same time, the departments and agencies in the collaborative network should not be given the feeling that the policy innovation is forced upon them.

This second lesson has some similarities with what Bason (2014: 222) describes as the metagovernance strategy of managing discomfort. According to Bason (2014: 222), one of the biggest challenges in innovation processes is to get involved actors from one state of affairs to another in a radical transition. Bason also recognizes that particularly at the beginning of an innovation process actors are faced with a lot of uncertainty. Therefore, he (2014: 223) argues that metagovernors should take sufficient time to help involved departments and organizations get used to the novel situation and adapt to the 'unknowns' of the innovation process.

However, in regard Bason's statement we do want to make the important disclaimer that the concept of 'sufficient time' should not be used as an excuse to delay the policy innovation process. In the end, 'innovation' entails a clear break from the past and not exactly knowing what the future will bring. As such, we do also agree with Michlewski (2008) when he argues that not all uncertainty can be managed and at a certain point the metagovernor and actors should simply embrace the discontinuity and open-endedness of the innovation process in order to get things going.

The third and final lesson that can be drawn from the empirical study is that metagovernors must avoid falling back into old habits and administrative routines. In our case, the FOD M&V had the tendency to routinely turn to its existing network of federal actors and expected that only reaching out to the carrier pigeons of the regional administrations would be sufficient to generate the policy innovation for sustainable transport. In addition, the FOD M&V's metagovernance style was rather traditional or bureaucratic (Termeer and Nooteboom, 2014: 182), in the sense that the department had an inclination to unilaterally structure tasks, manage crises, control the process, and decide on the planning in the collaborative network.

This study reveals that these customary practices of the FOD M&V had a negative (and enduring) impact on the relationships between the federal and regional actors in the collaborative network. In fact, at a certain point the regional actors were completely fed up with the federal stepmother that did not treat them as equals. Furthermore, these metagovernance acts did not contribute to the emergence of an innovative culture within the collaborative network, i.e. a situation wherein the involved stakeholders are encouraged to establish new work practices, procedures and experiences for the generation of innovative policy solutions in close partnership (Termeer and Nooteboom, 2014: 184).

Hence, we agree with Agger and Sørensen (2014: 196), Keast and Waterhouse (2014: 159), and Termeer and Nooteboom (2014: 184-185) when they state that policy innovation processes flourish when the metagovernor gives room to the self-organizing capacity of the actor constellation, is not tempted to develop too strict process schemes, and is foremost

attentive and adaptive to possible negative developments (e.g. tipping points, cascade effects and thresholds) that can hamper the deliberations among the stakeholders in the collaborative network.

Of course, this research also has certain limitations. In the article we already addressed the small-N problem of a single case study, and thereby the issue of context-dependent generalizations. Additionally, because we only studied the metagovernance of a failed policy innovation process in a dualistic federal system and we did not compare our findings to a case where the actors with the help of a metagovernor did agree on a policy innovation, our results and final reflections on useful metagovernance strategies can have some bias. That is to say, the impact of the impediments on the metagovernance dynamics in the collaborative network might be overrated, due to the negative process outcome. In consequence, the metagovernance approaches that we suggest to be most beneficial given the complex institutional dynamics, might have a smaller positive influence on the interactions among stakeholders in collaborative networks that operate in dualistic federal systems than we proclaim.

Therefore, we first of all propose that prospective studies examine the metagovernance of collaborative networks in dualistic federal structures where the involved actors did succeed in generating a policy innovation. Such an analysis would verify or falsify our research findings. Secondly, in line with Sørensen (2014: 10) we encourage scholars to also look at other complex innovation- and governance contexts. It would, for example, be interesting to see how the metagovernance dynamics for the promotion of policy innovations in collaborative networks that operate in cooperative federal structures, like the federal system of Germany, differ from our case findings. In this way, the research niche of the metagovernance of policy innovation processes in collaborative networks can further mature, and thereby enrich the scholarly debates on innovation in the public sector.

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## References

- Agger, A. & Sørensen, E. (2014). Designing collaborative policy innovation: lessons from a Danish municipality. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 188-209). New York, N.Y.: Routledge.
- Agranoff, R. & McGuire, M. (2003). *Collaborative Public Management: New Strategies for Local Government*. Washington, DC: Georgetown University Press.
- Agranoff, R. (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, 66 (special issue), 56-65.
- Ansell, C. & Torfing, J. (2014). Collaboration and design: new tools for public innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 1- 19). New York, N.Y.: Routledge.
- Bason, C. (2014). Design attitude as an innovation catalyst. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 209-229). New York, N.Y.: Routledge.
- Billiet, J., Maddens, B. & Frogner, A.P. (2006). Does Belgium (still) exist? Differences in political culture between Flemings and Walloons. *West European Politics*, 29(5), 912-932.
- Bommert, B. (2010). Collaborative innovation in the public sector. *International Public Management Review*, 11(1): 15-33.
- Blauwens, G. & Thiry, B. (1998). *Voorbereidende studie ter definiëring van een Federaal Plan voor een Duurzame Mobiliteit*. Belgische Kamer van Volksvertegenwoordigers.
- Burt, R.S. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.
- Coleman, J.S. (1994). *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.
- Deschouwer, K. (2006). And the peace goes on? Consociational democracy and Belgian politics in the twenty-first century. *West European Politics*, 29(5), 895-911.
- DiMaggio, P.J. & Powell, W.W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160.
- Doberstein, C. (2015). Designing Collaborative Governance Decision-Making in Search of a 'Collaborative Advantage'. *Public Management Review*, 18(6), 819-841.
- Driori, I. & Honig, B. (2013). A process model of internal and external legitimacy. *Organization Studies*. 34(3), 345-376.

Flyvbjerg, B.. (2011). Case study. This is a chapter. In Denzin, N. K. & Y.S. Lincoln (Eds). *The Sage Handbook of Qualitative Research* (pp. 301-316). Thousand Oaks, CA: Sage.

FOD M&V. (1999). *Een Duurzaam Mobiliteitsbeleid*. Gewone zitting Belgische Kamer van Volksvertegenwoordigers 1998-1999, 30 april 1999.

FOD M&V. (2000). *Plenaire vergadering dinsdag 17 oktober 2000, Namiddagvergadering, Handelingen*. Accessed March 8, 2016 at: <http://tinyurl.com/hgkgiba>.

FDPO. (2000). *Federaal Plan voor Duurzame Ontwikkeling 2000-2004*. Accessed March 8, 2016 at: <http://tinyurl.com/hv9jkwtd>.

FRDO. (2004). *Kaderadvies voor mobiliteit verenigbaar met duurzame ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/hlyrzur>.

Gaus, A. (2014). *A conceptual framework of (trans governmental) network management*. Paper presented at the 2<sup>nd</sup> WIPCAD Conference. Potsdam, Germany, December 4-6.

George, A. L. & Bennett, A. (2005). *Case studies and theory development in the Social Sciences*. Cambridge, MA: MIT Press.

Gerring, J. (2007). Is there a (viable) crucial-case method? *Comparative Political Studies*, 40(3), 231-253.

Green, A. E. & Orton, M. (2012). Policy innovation in a fragmented and complex multilevel governance context: Worklessness and the City Strategy in Great Britain. *Regional Studies*, 46(2), 153-164.

Happearts, S.. (2011). *The Sustainable Development Policies of Wallonia, North Rhine-Westphalia and North Holland*. Steunpunt Duurzame Ontwikkeling.

Head, B. W. (2008). Assessing network-based collaborations: effectiveness for whom? *Public Management Review*, 10(6), 733–749.

ICDO. (1997). *Rapport van de Interdepartementale Commissie Duurzame Ontwikkeling 1997-1998*. Accessed March 8, 2016 at: <http://tinyurl.com/jh3yhg4>.

ICDO. (1998). *Rapporten 1998 van de leden van de Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/z8xe6uy>.

ICDO. (2000). *Rapporten 2000 van de leden van de Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/jkrct6s>.

ICDO. (2001). *Rapporten 2001 van de leden van de Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/z7zd5vh>.

ICDO. (2002). *Rapporten 2002 van de leden van de Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/zhzduqj>.

ICDO. (2004). *Rapporten 2004 van de leden van Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/ho84vur>.

IMCDO. (2005). *De Nationale Strategie Duurzame Ontwikkeling*. Belgische Kamer van Volksvertegenwoordigers.

Kahneman, D. & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of Econometric Society*, 47(2), 263-291.

Keast, R. & Waterhouse, J. (2014). Collaborative networks and innovation: the negotiation-management nexus. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 148-170). New York, N.Y.: Routledge.

Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.

Mahroum, S. (2013). Policy innovations: towards an analytic framework. *Journal of Comparative Policy Analysis: Research and Practice*, 15(2), 182-197.

Marsh, I. & Edwards, L. (2009). Dilemmas of policy innovation in the public sector: a case study of the National Innovation Summit. *Australian Journal of Public Administration*, 68(4), 399-413.

Meuleman, L. (2008). *Public Management and the Metagovernance of Hierarchies, Networks and Markets*. Heidelberg, Germany: Physica-Verlag.

Michlewski, K. (2008). Uncovering the Design Attitude: Inside the Culture of Designers. *Organization Studies*, 29(3), 373-392.

Montin, S., Johansson, M. & Forsemalm, J. (2014). Understanding innovative regional collaboration: metagovernance and boundary objects as mechanisms. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 106-125). New York, N.Y.: Routledge.

Morgan, J.Q. (2010). Governance, policy innovation, and local economic development in North Carolina. *Policy Studies Journal*, 38(4), 679-702.

Nambisan, S. (2008). Transforming government through collaborative innovation. *Public Manager*, 37(3), 36-41.

OECD. (2014). *Innovating the Public Sector; From Ideas to Impact*. Paper presented at the OECD Conference, Paris, France, November 12-13.

- Oliver, C. (1991). Strategic Responses to Institutional Pressures. *The Academy of Management Review*, 16(1), 145-179.
- Provan, K. G. & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229-252.
- Provan, K. G. & Milward, H.B. (2001). Do Networks Really Work? A Framework for Evaluating Public-Sector Organizational Networks. *Public Administration Review*, 61(4), 414-423.
- Sørensen, E. & Torfing, J. (2009). Making governance networks effective and democratic through metagovernance. *Public Administration*, 87(2), 234-258.
- Sørensen, E. & Waldorff, S.B. (2014). Collaborative policy innovation: Problems and potential. *The Innovation Journal: The Public Sector Innovation Journal*, 19(3), 1-17.
- Sørensen, E. (2014). *The Metagovernance of Public Innovation in Governance Networks*. Paper presented at the Policy & Politics Conference, Bristol, UK, September 16-17.
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *The Academy of Management Review*, 20(3), 571-610.
- Swenden, W. & Jans, M.B. (2006). Will it stay or will it go? Federalism and the sustainability of Belgium. *West European Politics*, 29(5), 912-932.
- Termeer, C. & Nooteboom, S. (2014). Innovative leadership through networks. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 170-188). New York, N.Y.: Routledge.
- Tourangeau, R. (2000). Remembering What Happened: Memory Errors and Survey Reports. This is a chapter. In A. A. Stone, J.S. Turkkan, C.A. Bachrach, J. B. Jobe, H. S. Kurtzman & V.S. Cain (Eds). *The Science of Self-report: Implications for research and practice* (pp. 29-47). Mahwah, NJ: Erlbaum.
- Vlaamse Regering. (1996). *Discussienota voor verdere Staatshervorming*. Accessed March 8, 2016 at: <http://tinyurl.com/jg6gq9h>.
- Voets, J., Verhoest, K. & Molenveld, A. (2015). Coordinating for Integrated Youth Care: The need for smart metagovernance. *Public Management Review*, 17(7), 1-21.
- Yin, R. K. (2009). *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage.

## Appendix: The metagovernance performance of the FOD M&V

<b>Sub goal</b>	<b>Performance FOD M&amp;V:</b>	<b>Explanations:</b>
Connectivity	-	<i>The FOD M&amp;V primarily turned to the network of federal actors and barely included regional actors in the structural deliberations.</i>
Socialization	+/-	<i>The FOD M&amp;V influenced the operative conditions of the innovation process but left it completely open to the 'passive actors' to decide upon the overall objectives of the policy innovation.</i>
Institutionalization	-	<i>The FOD M&amp;V did more harm than good by unilaterally deciding what process steps and decision-making procedures were to be followed.</i>
Conflict management	+/-	<i>The FOD M&amp;V responded to conflicts, but did not proactively manage the discomfort the actors experienced with working together on a policy innovation.</i>
Internal legitimacy	-	<i>The FOD M&amp;V regularly overstepped its mandate, without notifying or having consent of the other involved actors.</i>
External legitimacy	-	<i>The FOD M&amp;V hardly acknowledged other external obligations than its own.</i>
Goal attainment	+/-	<i>The FOD M&amp;V directly pressed for results, without managing expectations or promoting shared ownership among the involved actors.</i>

## Chapter 3

# A Next Step in Collaborative Policy Innovation Research: Analysing Interactions using Exponential Random Graph Modelling

Written by Vidar Stevens and prof. dr. Koen Verhoest

### ABSTRACT

Collaborative policy innovation is a relatively new research niche in the public innovation literature. Collaborative policy innovation can be interpreted as processes in which a multitude of actors intentionally work together to develop, realize and propagate enriched policy solutions that are radically different from their predecessors in terms of policy understanding, program theory, objectives, and strategies in order to tame unmet societal challenges. The articles of Carstensen and Bason (2012) and Sørensen and Waldorff (2014), which were published here in *The Innovation Journal*, were amongst the first to use the concept in their studies. Ever since, various other scholars have explored the value of collaborations as vehicles for the promotion of policy innovations. In this discussion paper, we concisely summarize the contemporary state of the literature of the research niche, we propose a possible future venue, and we discuss a useful research methodology, Exponential Random Graph Modelling, which adds a new possibility to our methodological toolbox to study the interactive dynamics in collaborative policy innovations.

**Key words:** collaboration; innovation; Exponential Random Graph Modelling; governance; wicked issues.

**Reference:** Stevens, V. & Verhoest, K. (2016). A Next Step in Collaborative Policy Innovation Research: Analysing Interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-20.

## **Introduction**

Many OECD governments are challenged by increasingly complex and seemingly untameable policy problems (OECD, 2014). Wicked issues like global warming, ageing society and immigration can no longer be solved by traditional policy responses solely, as these daunting problems typically transcend conventional organizational and governmental boundaries in the public sector (Ney, 2009). Hence, academics have, under the slogan of collaborative policy innovation, proposed a new form of organizing innovation in policy processes as the cure for the alleged policy-making problem of the public sector (Carstensen and Bason, 2012; Agger and Sørensen, 2014; Sørensen and Waldorff, 2014).

We interpret collaborative policy innovations as processes in which a multitude of actors intentionally work together to develop, realize and propagate enriched policy solutions that are radically different from their predecessors in terms of policy understanding, program theory, objectives, and strategies in order to tame unmet societal challenges. Such a kind of collaborative processes are expected to boost innovation, as more stakeholders and thus more knowledge, information, resources and experiences are included in the decision making (Nambisan, 2008: 11; Ansell and Torfing, 2014: 10).

Collaborative policy innovation is a relatively new strand of research, and an emerging theme, in the public innovation literature (Sørensen and Waldorff, 2014). As a result, the research foci and thereby the findings of scholars have been rather diffuse. For that reason, this paper aims to cluster and (concisely) summarize the contemporary state of the art of the research niche, and identify possible venues for future research. With regard to the latter, we will make two specific claims. First of all, we will contend that the research niche of collaborative policy innovation is in need of more research on the interactive dynamics among actors in collaborative policy innovation processes; particularly, concerning practices of resource-sharing, commitment building and learning. Second, we will argue that the statistical network method of Exponential Random Graph Modelling (ERGM) is a useful tool to analyse and make inferences about these interactive dynamics between actors in collaborations that are used as vehicles for the promotion of policy innovations. Yet, before we do so, we elaborate on the definition of the concept of collaborative policy innovation.

### **The concept of collaborative policy innovation**

So far, various scholars have worked with the concept of collaborative policy innovation. Nonetheless, not many of them have actually defined the concept. In fact, we could only retrieve one definition from the literature, which is the definition of Agger and Sørensen (2014: 189). They write:

...collaborative policy innovation can be understood as the formulation, implementation and diffusion of new contested normative visions of goals and strategies for realizing a good society through collaborative processes involving relevant stakeholders.

More researchers have, in contrast, indicated what they understand with the term policy innovation, and how collaboration can contribute to the development, realization and propagation of policy innovations. Sørensen and Waldorff (2014: 3-4), for example, state:

...policy innovation is the formulation, realization and diffusion of new policy understandings, new political visions and strategies for solving problems... collaboration can enhance policy innovation in three ways: by creating new and more nuanced understandings of a policy problem; by formulating new political visions for society, and problem-solving strategies; and by enabling and mobilizing relevant audiences to adapt, realize and diffuse these problem definitions and policy ideas.

Scholars related to the more generic literature of collaborative innovation, which looks at the collaborations between relevant stakeholders irrespective of the type of innovation outcome<sup>9</sup> in the public sector, have put more effort in formulating a definition. Within this branch of research, scholars usually ascribe three features to the concept in order to distinguish it from other analytical terms.

First of all, these scholars argue that collaborative innovation involves a deliberate attempt to change, or even improve, the current state of affairs. Sørensen and Torfing (2012: 849) even speak of the intentional and proactive action of governments to generate policy solutions or establish new services that are a real improvement in the light of present and future demands. According to these scholars, traditional top-down models of public governance, which mainly leave public innovation in the hands of politicians and executive managers, rarely acknowledge the full complexity of the problems they seek to solve, the limitations of existing policy actions and the potential of new and emerging policy ideas. Therefore, many governments have felt the need to include more relevant stakeholders, not only in the implementation phase but also when new policies are being developed, in order gain a better notion of the policy dynamics of many of today's complex societal challenges (Sørensen and Waldorff, 2014: 3).

Second, scholars in this research niche contend that within processes of collaborative innovation, actors aim to bring about radical change (Sørensen and Torfing, 2010: 6-7; Sørensen and Torfing, 2011: 849-850). This means that involved stakeholders do not collaborate to produce or deliver more or less the same kind of goods, services, or policy solutions (first-order change), but rather to change the form, content, and repertoire of goods, services, and organizational routines (second-order change) or even transform the underlying problem understanding, policy objectives and program theory (third-order change) (Hall, 1993; Sørensen and Torfing, 2011: 850). It is hard to determine how much change eventually is necessary to speak of radical change. This depends on the subjective interpretations of situated agents (Sørensen and Torfing, 2011: 850). However, innovation outcomes will tend to challenge conventional wisdoms and sedimented practices.

Third, advocates of collaborative innovation expect that better and more innovative solutions for societal challenges emerge, as more stakeholders and thus more (new) knowledge,

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<sup>9</sup> Policy innovation is just one possible 'innovation outcome'. De Vries et al. (2014: 13) identify other innovation outcomes, like process innovations, product innovations, service innovations, conceptual innovations, etc.

information, resources and experiences are included in the policy processes. As Nambisan (2008: 11), for example, writes:

...new knowledge will increasingly be created through repeated interactions and dialogue among the involved actors; that is, the cumulative nature of knowledge creation...which [in turn] amplifies and enhances the quality of innovation outcomes.

On the basis of these features and conceptualizations, we believe that collaborative policy innovations can best be interpreted as processes in which a multitude of actors intentionally work together to develop, realize and propagate enriched policy solutions that are radically different from their predecessors in terms of policy understanding, program theory, objectives, and strategies in order to tame unmet societal challenges.

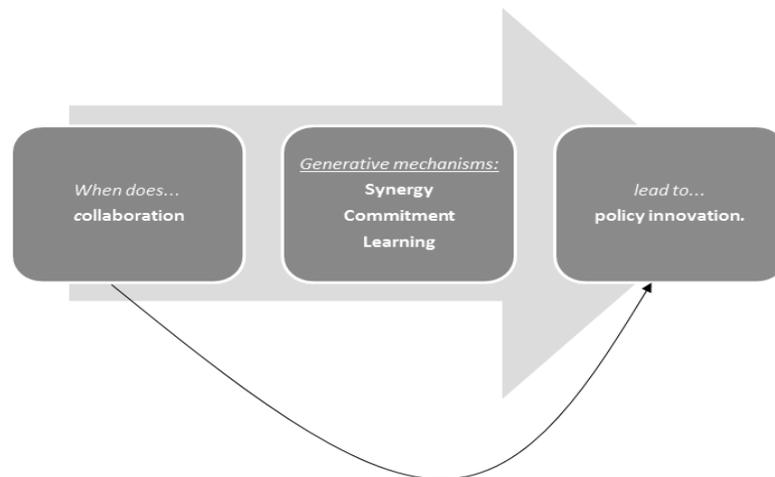
## **Two generations of studies and a possible future venue**

Within the contemporary literature on collaborative policy innovation, two generations of studies can be identified. The first generation primarily looked at the problems and potential of collaborative processes of policy innovation (Sørensen and Waldorff, 2014; Carstensen and Bason, 2012). In these studies, different process conditions are mentioned that hinder the innovative capacity of collaborative policy innovations. As such, scholars tried to gain a better notion of the general circumstances in which collaborative processes for the promotion of policy innovations can flourish.

A great example of a study that belongs to this first generation is the work of Agger and Sørensen (2014), who studied a collaborative policy innovation in the Danish municipality of Albertslund. In their conclusion they (idem: 204-205) inter alia write:

...there is no guarantee that collaboration leads to innovation. Collaborative processes that aim for consensus or the least common denominator will tend to result in a marginal adaption of a policy rather than in more radical forms of policy innovation. Moreover, it is far from certain that new innovative policies developed in collaborative policy arenas will be authorized by political decision-makers. Whether the drivers for collaborative policy innovation are fully exploited and the barriers overcome depend among other things on the formal and informal institutional design in which collaborative policy innovation is to take place. The formal organizational framing conditions: what can be discussed? Who is included in the collaboration process? What is the time frame and how is the output to be communicated to relevant audiences? The formal framing influences how open or closed the collaborative innovation process will be. The informal institutional framework consists of the sedimented role perceptions and practices of involved actors. Role perceptions and practices that hamper policy collaboration are likely to reduce the innovative capacity of collaborative policy arenas.

More recently, a second generation of studies has emerged that specifically looks at the generative mechanisms of collaborative policy innovation. Generative mechanisms can best be understood as the processes by which a causal relation comes about; in our case, why collaboration actually leads to policy innovation (see figure 2).



**Figure 2: The expected causality and generative mechanisms in collaborative policy innovation networks.**

Oftentimes, three generative mechanisms are mentioned in the collaborative policy innovation literature: synergy, commitment and learning (Ansell and Torfing, 2014: 11; Gray and Ren, 2014: 127; Bressers, 2014: 103). Synergy is by Ansell and Torfing (2014: 11) defined as a social process in which stakeholders bring together complementary resources or capabilities (i.e. resource-sharing). Commitment, then, is understood as the social process through which actors in groups build consensus and support for a particular policy innovation (Ansell and Torfing, 2014: 11; Bressers, 2014: 103). Lastly, learning is considered as the social process whereby cognitive change occurs as a result of interaction between different stakeholders, which can transform or reframe the collective sense of possibility or generate new ideas (Ansell and Torfing, 2014: 11).

Within this second generation of studies, scholars mainly indicated whether or not these generative mechanisms were present in the analysed cases; and if so, in what ways these were important for the development of the collaborative policy innovation process. Waldorff et al. (2014: 85), for example, stated:

...in the climate management case, synergy, learning and commitment played an essential role in the innovation process. All three mechanisms were important for the implementation of the local climate management initiatives. An important driver for the innovation was the synergy created when the local knowledge of the ECAN ambassadors was combined with the general knowledge of the ECAN coordinator about resources consumption, environmental behaviour and especially the administrative dimensions of the local government. Learning was crucial for the ambassadors in order to get new ideas for local initiatives. Commitment was also crucial for the success of the ECAN from the perspective of the ambassadors.

Again other scholars pointed to the fact that the generative mechanisms are closely interconnected or sometimes even mutually reinforcing. Bressers (2014: 103), for example, wrote:

...the synergy between the innovation stakeholders was reinforced by learning and openness to learning, whereas commitment of these stakeholders also improved the synergy.

In a similar vein, Ansell and Torfing (2014: 12) argued:

...learning may help to build commitment among actors in collaborative policy innovations, which facilitates synergy, which feeds back to shape learning.

Most of these studies have, however, been rather superficial when it comes to making inferences about the dynamics in which these three generative mechanisms operate (Ansell and Torfing, 2014: 238-239). That is to say, scholars have not been very explicit about how, when and why individual actors are likely to engage with other actors in practices of learning, resource-sharing and consensus-building in collaborative policy innovations. In point of fact, the only behavioural insight that can be derived from existing (case) studies is that not all actors have the same propensity, or ability, to engage with other stakeholders in these three generative processes (Bressers, 2014: 104; Montin et al., 2014: 117; Harris, 2014: 8; Keast and Waterhouse, 2014: 156; Termeer and Nooteboom, 2014: 179).

This lack of scholarly attention to the behavioural manifestations of actors in collaborative policy innovations is striking, as it means that we (i.e. the academic community) actually have little knowledge about the interactive dynamics within collaborative processes of innovation, and thus also about the manner in which emergent interaction patterns between actors impact the quality of the generative mechanisms in terms of their contribution to the development, realization and propagation of a policy innovation. For example, how do individual agencies usually behave in processes of collaborative innovation, what possibly explains different sorts of actor behaviour, how might different sorts of actor behaviour lead to different patterns of social clustering in collaborative networks of innovation, and what impact do different sorts of social clustering, in turn, have on the innovative capacity of a collaborative group of actors?

From a more critical stance, it can even be argued that on the whole scholars have only put a little effort in scrutinizing accepted truisms about the interactive dynamics and corresponding benefits that arise from collaborative processes of policy innovation (Ansell and Torfing, 2014: 238-239), like 'collaborative interaction facilitates trust-based circulation and cross-fertilization of new and creative ideas between actors' or 'collaboration ensures that public innovation draws upon and brings into play all relevant innovation assets in terms of knowledge, imagination, creativity, courage, resources, transformative capacities and political authority' (Sørensen and Torfing, 2012: 5).

Hence, we argue that for scientific purposes (in terms of scientific progress), and in order to gain a better notion of the value of collaborations as vehicles for the promotion of policy innovation, it would be wise to devote in prospective studies more attention to the determinants that explain why individual actors engage in, or refrain from, practices of learning, resource-sharing and commitment-building with some stakeholders and not with others in processes of collaborative policy innovation.

## The limitations of traditional methods for studying network data

There are various traditional research methods and strategies that can be used to analyse and make inferences about these actor-dynamics in the generative mechanisms of collaborative policy innovations. Then again, each method and strategy also has certain limitations. Scholars can, for instance, use the case-study method or other qualitative methods, such as process-tracing. This will provide them with rich and detailed information about the interactions under study. However, using either one of these qualitative methods would be very labour-intensive and time-consuming, given the fact that the researcher has to determine for every actor that participates in the collaborative policy innovation process whether it engages in practices of learning, resource-sharing and consensus-building with all other involved stakeholders; and if not, the researcher has to explain what makes that a specific actor does connect with some stakeholders but not with others.

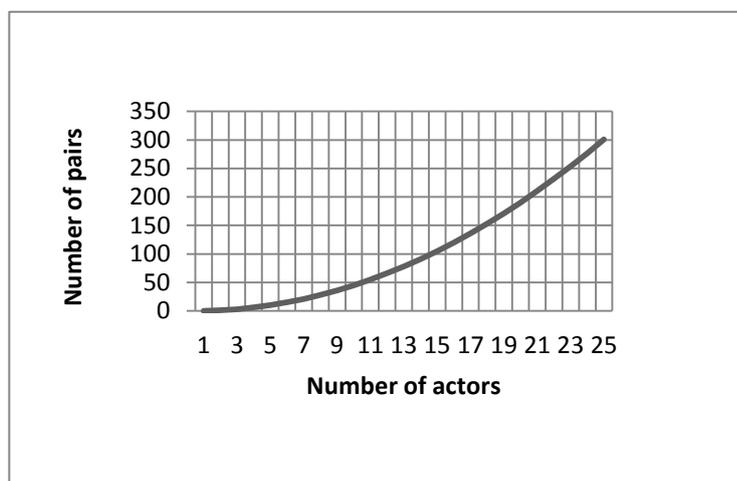


Figure 3: Actor-pair diagram.

In a small network comprising ten actors, for example, where connections (e.g. learning practices) between two actors are for convenience sake considered to be reciprocal, this would already imply that the researcher has to analyse the sort of relationship, and the reasons for the existence of this particular relationship, of 45 actor pairs<sup>10</sup>. For a network consisting of 20 actor members, this even entails that the relationships of 190 different pairs of actors have to be investigated (see figure 3). Therefore, we do not really perceive these qualitative research methods as useful tools for analysing and making inferences about the interactive dynamics in the generative mechanisms of collaborative policy innovations, if the amount of involved stakeholders is larger than 8.

Another possibility would then be to incorporate every relationship (e.g. learning practices) an actor has with all other involved actors as a single observation in the dataset, and subsequently perform a multiple regression on this dyadic data (i.e. data that describes a particular connection of one actor with another) and a number of selected predictor variables. Yet, there are two problems with using regression for such a kind of analysis.

<sup>10</sup> We used the following formula:  $\frac{\text{The amount of actors} * (\text{the amount of actors} - 1)}{2}$

The first problem is that regression models always work with the assumption that observations are independent of each other (Robins et al., 2012). Research has, however, shown that the very presence or absence of other connections between actors in collaborations, or in any other sort of network setting, also affects whether relationships are initiated, maintained or destroyed (Lubell et al., 2012). Within the literature this is called the tie<sup>11</sup>-interdependence effect.

A classic example of a tie-interdependence effect is the transitivity feature – better known as the ‘a friend of a friend is my friend principle’ – which was developed by scholars to describe the phenomenon in friendship networks that person A is more likely to become friends with person C, if person B (who is a good friend of person A) also has a close friendship with person C (Hunter et al., 2008: 5). As such, regression models are inherently biased and flawed when it comes to making inferences about the relational dimension between stakeholders in collaborations, as the method tears the individual actor from his or her social context (Ward et al., 2007).

A second problem that arises when using regression models for analysing and interpreting dyadic data in collaborations, is the problem of data multiplication (Cranmer, et al., 2012: 283). The problem of data multiplication entails that the number of observations in these dyadic datasets is much larger than the real number of actors active in the collaboration that is being studied. In consequence, the standard errors of the multiple regressions shrink progressively, which in turn, makes it a lot harder to conclude that an effect of a given predictor variable is not statistically significant. This is a problem, because, if the number of observations in the dataset is artificially large, then it becomes quite likely that we will erroneously accept that a significant effect exists when, in fact, it does not (idem: 284).

To this end, we would like to bring another flexible methodological tool to attention which, according to us, is more suited for studying the actor-dynamics in each of the generative mechanisms of collaborative policy innovation: the statistical network method of Exponential Random Graph Modelling (ERGM).

ERGM is a relatively new methodology. In fact, only a few scholars in the political sciences have so far worked with the social network method (see Feiock et al., 2010; Henry et al., 2010; Lubell et al., 2012; Scott, 2015). In addition, the development of extra features for the statistical network tool is still ongoing (Krivitsky, 2012). The method already has, however, a huge potential.

The great merits of ERGM, in comparison to the aforementioned research methods and strategies, are that the method is capable of performing inferential tests on the interactive dynamics in both relatively small, as well as, extremely large actor networks, while accounting for the aspect of tie-interdependence in its analysis by considering so-called endogenous factors as predictor variables. In the next section, we will go into more detail on these merits plus the functioning of the ERGM methodology.

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<sup>11</sup> A tie is jargon for a particular sort of relationship between an actor and another actor. Within the academic literature edge is also used as a synonym for a tie.

## Exponential Random Graph Modelling

Hunter, Goodreau and Handcock (2008) describe ERGM as a statistical network method that aims to explain tie-formation. In laymen's terms, this means that with the help of ERGMs a scholar is able to draw inferential conclusions about why actors have the tendency to connect (e.g. resource-sharing, learning and consensus-building) with some actors and not with others in network settings. This outcome variable (i.e. tendency to connect or not), and thereby the overall purpose of the methodological tool, thus makes the ERGM-methodology well-equipped for exploring and analysing the actor-dynamics in the future venue that we proposed in section 3.

Documentation about the functioning and operational system behind ERGMs is well established in the literature (Scott, 2015). Handcock et al. (2015); Hunter et al. (2008); Yaveroğlu et al. (2014); Hunter, Goodreau and Handcock (2008); and Desmarais and Cranmer (2012) have written detailed accounts about: the basic principles of the statistical network model, the guidelines for performing the analysis, checking the network assumptions, diagnostics and interpreting the results, the algorithm and the formulas of ERGM-models, the jargon of these models in graph-theoretical language, and how to retrieve and use the ERGM-package<sup>12</sup> from the Comprehensive R Archive Network (CRAN). As such, it is not our intention to provide a step-wise description of how to utilize the ERGM methodology. Yet, we do want to give the readers a basic sense of how ERGM works, and what kind of predictor variables (and hypotheses) can be tested when scholars intend to use the methodology for making inferences about the interactive actor-dynamics in the generative mechanisms of collaborative policy innovations.

The reason for this is that we can tell from our personal experience that the available literature on ERGM is highly technical and largely inaccessible. In fact, most work on the methodology has been written by and for statisticians (but see Harris, 2014). These articles are full of complex equations that a scholar has to grasp first, before being able to get a basic understanding of ERGMs. This may cause that applied scholars – to which we also consider ourselves – feel quite some anxiety with utilizing the ERGM methodology, and in the worst case even decide to avoid working with it. This will, in turn, undermine the great potential the methodology has in terms of unravelling the black-boxes of the operative dynamics of each of the generative mechanisms of collaborative policy innovations, in comparison to more traditional methods like regression models and case study research (see section 4).

Figure 4 presents, as an example, such a complex formula that is commonly used to describe the functioning of an ERGM. Oftentimes, this equation is accompanied with a ditto complex description, like the following text of Desmarais and Cranmer (2012: 403-403):

...the ERGM takes the form of a probability distribution that gives the probability of observing the entire network of  $n$  actors, which we present as  $Y$ , an  $n \times n$ -matrix with  $Y_{ij}$  if there is a tie from  $i$  to  $j$  and 0 otherwise. The  $\Gamma_j$  are network statistics that are specified to measure features of the network that are hypothesized to influence the likelihood of observing a particular realization of the network. The  $\theta$  are parameters, similar to regression coefficients that give the effects of the respective network

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<sup>12</sup> See the website: <https://cran.r-project.org/web/packages/ergm/index.html>.

statistics on the likelihood of observing a particular realization of the network; the higher  $\theta_j$ , the higher the likelihood of observing a network with a high value of  $\Gamma_j$ .

$$P(Y) = \frac{\exp\left(\sum_{j=1}^k \theta_j \Gamma_j(Y)\right)}{\sum_{Y^* \in \mathcal{Y}} \exp\left(\sum_{j=1}^k \theta_j \Gamma_j(Y^*)\right)}$$

Figure 4: The mathematical equation of ERGMs.

The logic behind ERGM is, however, quite straightforward. After data is collected (with the help of surveys or structured interviews) and turned into numerical values, an ERGM first calculates the probability of observing the analysed network compared to other possible random networks with the same number of network members<sup>13</sup>. Subsequently, specific features (i.e. predictor variables) of the observed network are selected and included as a set of statistics computed on the network. If eventually a predictor variable is significantly different from zero, it can be interpreted that the corresponding statistic significantly affects the probability that one member forms a connection (i.e. the outcome variable) with another member in the network, while controlling for the other statistics in the analysis.

### Exogenous factors: node attributes and dyadic effects

Generally, two types of statistics are included as predictor variables in ERGMs: exogenous and endogenous variables (Scott, 2015: 11-12). Exogenous variables, also called covariate effects, are influences from outside the collaboration that impact the behaviour of involved actors. In graph-theoretical terminology, it can be stated that exogenous variables manifest themselves at both the node and dyad level. This means that some exogenous factors are specific features of single actors (i.e. node attributes), while other covariate effects (i.e. dyadic terms) specifically relate to the relational dimension between two network members.

When the ERGM methodology is used for examining the interactive actor-dynamics in the generative mechanisms of collaborative policy innovations, a scholar may experience some difficulty with defining the node-level in the analysis. The reason for this is that in some situations it is not so much the organization itself that takes part in the collaborative policy innovation process, but rather a person (e.g. minister, high-ranked policy officer or civil servant) who represents the organization. As such, a scholar may have to deal with two interrelated units of analysis at the node-level: the representative and its home organization. Hence, we argue that two sorts of node attributes can be considered as predictor variables in these kinds of ERGM analyses:

1. Node attributes that specifically relate to individual traits and experiences of the representative. Does the representative, for example, have good communication skills? Is the representative visionary and knowledgeable? Does she or he have many

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<sup>13</sup> Because there are many possible network configurations, it is not feasible to compare the analysed network to all other network graphs with the same amount of participants (Hunter, Handcock, Butts, Goodreau, Morris, 2008: 6). Therefore, an ERGM uses a so-called Markov chain Monte Carlo-procedure (MCMC) to estimate model parameters on basis of maximum likelihood estimation. For more information about how this MCMC-procedure exactly works, we advise to read the articles of Scott (2015: 7), Harris (2014: 71), and Hunter et al. (2008: 2).

years of relevant work experience? Other possibilities that fall within this category are: the willingness of the representative to initiate a radical policy change (Metselaar, 1997), the extent to which the representative perceives the policy innovation process as meaningful for society (Tummers, 2012: 364), for its clients (Tummers, 2012: 364), and for its own work activities (Holt et al., 2007), etc.

2. Node attributes that consider the influence of the home organization on the practices of the representative. Possible influences that can be considered as such a kind of predictor variables are: the mandate/autonomy of the representative in the collaborative process (Van den Brink et al., 2006), constituent multiplicity (Oliver, 1991: 162), politicking in the home organization (Bouckenooghe et al., 2009), managerial support and control (Parker and Price, 1994; Rhoades and Eisenberger, 2002), and political support by the Minister (Wasserman and Galaskiewicz, 1994: 196).

With regard to exogenous dyadic terms, the most commonly used factors in ERGMs are so-called homophily and heterophily effects (Harris, 2014: 55; Morris et al., 2008). Homophily entails that two nodes share a specific node attribute, whereas heterophily is used to denote that two nodes differ on a node attribute. If we relate these sorts of predictor variables to the actor-dynamics in the generative mechanisms of collaborative policy innovations, a scholar can for instance test in a ERGM if the probability is higher that an actor engages in learning practices with another actor if they belong to the same tier of government (homophily effect), or if they operate in different policy sectors (heterophily effect), as was earlier suggested by Lee et al. (2012: 558-559).

Other statistical terms that fall within the category of exogenous dyadic terms are relational attribute effects or so-called edge attributes (Morris et al., 2008: 6). These are specific factors that consider the relational dynamics between two actors. A good example of such a kind of predictor variable is 'the degree of divergence that exists between the objectives of two actors in a collaborative policy innovation', as was *inter alia* determined by Koppenjan and Klijn (2004: 47-49) and Schön and Rein (1994: 26) as a relevant factor for explaining the interactive dynamics among actors in policy games and policy controversies.

### **Endogenous factors and interaction-terms**

Endogenous factors, in contrast, are structural effects inherent to the network itself that are modelled as influences on the behaviour of network members (Boehmke et al., 2016: 128). These network configurations are thus operationalizations of the earlier mentioned tie-independence effects. The complexity of network settings is such that an exhaustive list<sup>14</sup> of endogenous factors cannot meaningfully be given. In point of fact, Handcock et al. (2015) already discuss more than 100 types of possible endogenous factors that can be included in ERGM analysis.

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<sup>14</sup> A long list of all possible endogenous variables can be read in the articles of Morris, Handcock and Hunter (2008), Lusher et al. (2013), Snijders et al. (2006) and Handcock et al. (2015).

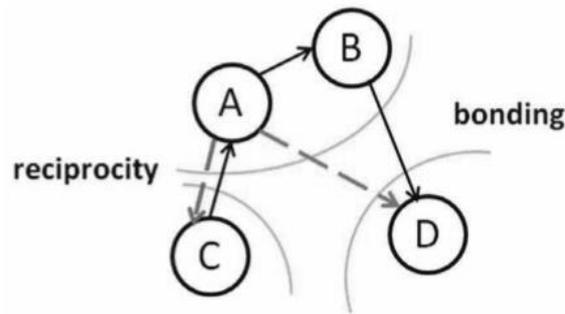


Figure 5: Endogenous features of reciprocity and transitive triads.

Lee et al.'s (2012) study, however, provides some good examples of possible endogenous hypotheses that can be incorporated in ERGMs for understanding the interactive dynamics in collaborations. These scholars *inter alia* hypothesized (*idem*: 555-556) that in collaborative interorganizational development networks, organizations will forge reciprocal relationships (see dotted line in figure 5 from actor A to actor C), and they will bond with partners whose trustworthiness has been scrutinized by others (see the dotted line in figure 5 from actor A to actor D). Hypothesis 1 was subsequently operationalized by including the endogenous feature of reciprocity in the ERGM analysis, while hypothesis 2 was analysed by working with the endogenous variable of transitive triads.

Other endogenous effects that are usually included in ERGM-models are outdegree, which represents the basic tendency of actors to have relationships at all (Wasserman and Faust, 1994), the earlier-mentioned tendency towards transitivity (Davis, 1970; Holland and Leinhardt, 1971), and specific popularity effects that consider the cumulative advantage of some stakeholders in collaborations.

Like in many other statistical tests, ERGM also allows to include interaction-terms in the model to test theoretically interesting hypotheses. In studies on tie-formation in collaborative policy innovations, a scholar can for example test an interaction-term between the endogenous variable of 'reciprocity' and 'same minister', as a means to find out if representatives of organizations that work for the same minister are more likely to learn from each other's perceptions (*i.e.* reciprocal learning) with regard to the problem situation and possible solutions for the cross-cutting issue, than representatives of organizations that work for different ministers.

### **The limitations of ERGMs**

There are, however, also certain limitations and drawbacks to the use of ERGM-models. First of all, the statistical network method is limited by an inability to accommodate actor networks with valued ties. This means that the outcome variable in ERGMs is binary in nature: an actor has either a connection with another actor or not. Though, recent extensions by Wyatt et al. (2010), Desmarais and Cranmer (2012), Krivitsky (2012), and Scott (2015) may provide the key to overcome this limitation. Second, one assumption explicit to ERGMs is that the researcher has a strong theoretical grasp of the dynamics in the network of actors under study and is capable of specifying the objective function to perform the analysis. If the researcher has therefore little theory about the interactive dynamics in the collaboration, than the method

of ERGM would probably not be appropriate. In such a situation, it would be better to use the case study method. That being said, when theory is strong, and there is a direct interest of the researcher in testing for specific predictor variables, a method such as ERGM is preferable (Desmarais and Cranmer, 2012: 431).

## **Conclusion**

This paper calls attention to the importance of more explanatory research focusing on the interactive (generative) dynamics in collaborative processes of policy innovation. In the first sections, we elaborated on the definition of collaborative policy innovation and discussed the current state of the art of the research niche. While earlier studies have certainly contributed to our understanding of the general conditions that hinder or stimulate actors in collaborations in their endeavours to develop, realize and propagate policy innovations, we argued that there are also certain shortcomings in our current knowledge on collaborative policy innovations. These relate, especially, to the interactive dynamics between actors and practices of resource-sharing, commitment-building and learning.

Our first argument is not so much that previous studies failed to look at the generative processes (i.e. learning, synergy and commitment) that cause the collaboration that leads to policy innovation, but rather that the way in which earlier research on these generative mechanisms was conducted did not provide us with clear insights into why actors in collaborations are likely to connect with some actors but not, or to a lesser extent, with others during processes of collaborative policy innovation. Hence, we suggested that in prospective studies scholars should devote more attention to the determinants that explain why actors have the propensity to engage in practices of learning, resource-sharing, and commitment-building with only a selected group of actors in collaborations, as has been indicated by several of the existing case studies. Such an analysis would further allow scrutinizing some of the accepted truisms about the benefits of collaborative interaction for policy innovation.

Subsequently, we made our second point in the paper by arguing that traditional research methods, like case-study research and regression models, for different reasons are not very suited to study the interactive dynamics in collaborative processes of policy innovation. Studying network data (like collaborations) with the case study method can become a very labour-intensive and time-consuming research endeavour, while using regression models for this research activity leads to flawed outcomes due to issues of data multiplication and independence of errors.

Therefore, we introduced the statistical network method of Exponential Random Graph Modelling as a valuable methodological alternative. Additionally, we offered some relevant literature suggestions and a basic description of how ERGM works as a means to reduce the amount of insecurity applied political scientists may experience when employing ERGM-models. We particularly explained that the great merits of ERGM, in comparison to the aforementioned research methods, are that the method is capable of performing inferential tests on the interactive dynamics in both relatively small, as well as extremely large actor networks, while accounting for the aspect of tie-interdependence in its analysis by also considering so-called endogenous factors as predictor variables.

Of course, the method of Exponential Random Graph Modeling is not the only (relatively) new methodology that is capable of studying the role of the individual agency in collaborative processes (of policy innovation). This is also not something we want to claim. There has, for example, also been an interesting study by Jin Im (2013: 115) that used the Qualitative Comparative Analysis methodology to examine the impact of an organization's culture on the way it collaborates with other actors in collaborations.

In the end, we just hope that this paper contributes to the exploration of new venues in the field of collaborative policy innovation, and encourages scholars to add new equipment to their methodological toolbox by making use of relatively new research methods, like Exponential Random Graph Modelling.

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## References

Agger, A. & Sørensen, E. (2014). Designing collaborative policy innovation: lessons from a Danish municipality. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 188-209). New York, N.Y.: Routledge.

Ansell, C. & Torfing, J. (2014). Collaboration and design: new tools for public innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 1- 19). New York, N.Y.: Routledge.

Boehmke, F. J., Chyzh, O. & Thies, C.G. (2016). Addressing Endogeneity in Network Position Similarity Measures. *Political Science Research and Methods*, 4(1), 123-149.

Bouckenooghe, D., Devos, G. & Van den Broeck, H. (2009). Organizational Change questionnaire – climate of change, processes and readiness: Development of a new instrument. *The Journal of Psychology*, 143(6), 559-599.

Bressers, N. (2014). The impact of collaboration on innovative projects: a study of Dutch water management. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 89-106). New York, N.Y.: Routledge.

Carstensen, H. V. & Bason, C. (2012). Powering collaborative policy innovation: Can innovation labs help?. *The Innovation Journal: The Public Sector Innovation Journal*, 17(2), 1-25.

Cranmer, S. J, Desmarais, B.A. & Menninga, E.J. (2012). Complex dependencies in the alliance network. *Conflict Management and Peace Science*, 29(3), 279-313.

Davis, J. A. (1970). Clustering and Hierarchy in Interpersonal Relations: Testing Two Graph Theoretical Models on 742 Sociomatrices. *American Sociological Review*, 35(5), 843-851.

- De Vries, H., Tummers, L. & Bekkers, V. (2014). Innovation in the public sector: A systematic review and future research agenda. *Public Administration*, 94(1), 146-166.
- Feiock, R. C., Lee, I.W., Park, H.J. & Lee, K.H. (2010). Collaboration Networks among Local Elected Officials: Information, Commitment and Risk Aversion. *Urban Affairs Research*, 39(2), 437-480.
- Gray, B. & Ren, H. (2014). The importance of joint schemas and brokers in promoting collaboration for innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 125-148). New York, N.Y.: Routledge.
- Handcock, M. S., Hunter, D. S., Butts, C.T., Goodreau, S.M., Krivitsky, P.N., Morris, M., Wang, L., Li, K. & Bender-de Moll, S. (2015). *Fit, Simulate and Diagnose Exponential-Family Models for Networks*. The Comprehensive R Archive Network. Accessed February 26, 2016 at: <https://cran.r-project.org/web/packages/ergm/ergm.pdf>
- Hall, P. (1993). Policy Paradigms, Social Learning and the State: The Case of Economic Policymaking in Britain. *Comparative politics*, 25(3), 275-296.
- Harris, J. K. (2014). *An Introduction to Exponential Random Graph Modelling*. London, UK: Sage Publications.
- Henry, A.D., Lubell, M. & McCoy, M. (2010). Belief Systems and Social Capital as Drivers of Policy Network Structure: The Case of California Regional Planning. *Journal of Public Administration Research and Theory*, 21(3), 419-444.
- Holland, P. W. & Leinhardt, S. (1971). Transitivity in structural models of small groups. *Comparative Group Studies*, 2(2), 107-124.
- Hunter, D.H., Goodreau, S.M. & Handcock, M.S. (2008). Goodness of Fit of Social Network Models. *Journal of the American Statistical Association*, 103(481), 248-258.
- Hunter, D. H., Handcock, M.S., Butts, C.T., Goodreau, S.M. & Morris, M. (2008). ERGM: A Package to Fit, Simulate and Diagnose Exponential-Family Models for Networks. *Journal of Statistical Software*, 24(3), 1-29.
- Keast, R. & Waterhouse, J. (2014). Collaborative networks and innovation: the negotiation-management nexus. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 148-170). New York, N.Y.: Routledge.
- Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.
- Krivitsky, P. N. (2012). Exponential random graph models for valued networks. *Electronic Journal of Statistics*, 6(1), 1100-1128.

Lee, Y., Lee, I.W. & Feiock, R.C. (2012). Interorganizational Collaboration Networks in Economic Development Policy: An Exponential Random Graph Model Analysis. *Policy Studies Journal*, 40(3), 547-573.

Lubell, M., Scholz, J., Berardo, R. & Robins, G. (2012). Testing policy theory with statistical models of networks. *Policy Studies Journal*, 40(3), 351-374.

Lusher, D., Kremer, P. & Robins, P. (2014). Cooperative and Competitive Structures of Trust Relations in Teams. *Small Group Research*, 45(1), 3-36.

Metselaar, E. E. (1997). *Assessing the willingness to change*. Vrije Universiteit Amsterdam. Accessed February 26, 2016 at:  
<http://dspace.uvu.vu.nl/bitstream/handle/1871/15590/283.pdf?sequence=1>.

Montin, S., Johansson, M. & Forsemalm, J. (2014). Understanding innovative regional collaboration: metagovernance and boundary objects as mechanisms. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 106-125). New York, N.Y.: Routledge.

Morris, M., Handcock, M.S. & Hunter, D.R. (2008). Specification of Exponential-Family Random Graph Models: Terms and Computational Aspects. *Journal of Statistical Software*, 24(4), 1-24.

Nambisan, S. (2008). Transforming government through collaborative innovation. *Public Manager*, 37(3), 36-41.

Ney, S. (2009). *Resolving messy policy problems: Handling conflict in environmental, transport, health and ageing policy*. New York, N.Y.: Routledge.

OECD. (2014). *Innovating the Public Sector; From Ideas to Impact*. Paper presented at the OECD Conference, Paris, France, November 12-13.

Oliver, C. (1991). Strategic Responses to Institutional Pressures. *The Academy of Management Review*, 16(1), 145-179.

Parker, L.E. & Price, R.H. (1994). Empowered managers and empowered workers: The effects of managerial support and managerial perceived control on workers' sense of control over decision making. *Human Relations*, 47(8), 911-928.

Rhoades, L. & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology*, 87(4), 698-714.

Robins, G., Lewis, J.M. & Wang, P. (2012). Statistical Network Analysis for Analysing Policy Networks. *Policy Studies Journal*, 40(3), 375-401.

Schön, D. A. & Rein, M. (1994). *Frame Reflection: Towards the Resolution of Intractable Policy Controversies*. New York, N.Y.: BasicBooks.

Scott, T.A. (2015). Analysing Policy Networks Using Valued Exponential Random Graph Models: Do Government-Sponsored Collaborative Groups Enhance Organizational Networks?. *Policy Studies Journal*, 44(2), 215-244.

Snijders, T., Pattison, P.E., Robins, G.L. & Handcock, M.S. (2006). New Specifications for Exponential Random Graph Models. *Sociological Methodology*, 36(1), 99-153.

Sørensen, E. & Waldorff, S.B. (2014). Collaborative policy innovation: Problems and potential. *The Innovation Journal: The Public Sector Innovation Journal*, 19(3), 1-17.

Sørensen, E. & Torfing, J. (2010). Collaborative Innovation in the Public Sector: an analytical framework. *Ritsumeikan Hogaku*, 330(2), 209-236.

Sørensen, E. & Torfing, J.(2012). Enhancing collaborative innovation in the public sector. *Administration and Society*, 43(8), 842-868.

Termeer, C. & Nooteboom, S. (2014). Innovative leadership through networks. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 170-188). New York, N.Y.: Routledge.

Tummers, L. (2012). Policy Alienation of Public Professionals: The Construct and its Measurement. *Public Administration Review*, 72(4), 516-525.

Van den Brink, G., Jansen, T. & Pessers, D. (2006). *Beroepszeer: Waarom Nederland niet werkt*. Den Haag, The Netherlands: Boom.

Waldorff, S.B., Kristensen, L.S. & Ebbesen, B.V. (2014). The complexity of governance: challenges for public sector innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 70-89). New York, N.Y.: Routledge.

Ward, M.D., Siverson, R.M. & Cao, X. (2007). Disputes, Democracies, and Dependencies: a re-examination of the Kantian Peace. *American Journal of Political Science*, 51(3): 583-601.

Wasserman, S. & Galaskiewicz, J. (1994). *Advances in Social Network Analysis: Research from the Social and Behavioural Sciences*. Newbury Park, CA: Sage Publications.

Wasserman, S. & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge, MA: Cambridge University Press.

Wyatt, D., Choudhury, T. & Bilmes, J. (2009). *Dynamic Multi-Valued Network Models for Predicting Face-to-Face Conversations*. Paper presented on the NIPS-09 Workshop on Analysing Networks and Learning with Graphs. Accessed September 22, 2016 at: <http://pac.cs.cornell.edu/pubs/wyatt-nips-nets-09.pdf>

Yaveroğlu, Ö.N., Fitzhugh, S.M., Kurant, M., Markopoulou, A., Butts, C.T. & Pržulj, N. (2015). A Package for ERG Modelling Based on Graphlet Statistics. *Journal of Statistical Software*, 65(12), 1-29.



# Chapter 4

## Individual learning behaviour in collaborative networks

Written by Vidar Stevens

### ABSTRACT

This article examines the conditions under which individuals are likely to engage with other participants in learning activities during collaborative processes of innovation in the public sector. Drawing on the statistical network methodology of Exponential Random Graph Modelling we show that the formation of tightly clustered learning alliances in collaborations is not something straightforward. Furthermore, the analyses demonstrate that the decision of an individual to show learning behaviour towards another actor in the collaboration mainly depends on whether this other actor shows good, and exemplary, collaborative behaviour or if the other actor sits in a position where his or her involvement accrues power within the collective.

**Key words:** learning; collaborative networks; Exponential Random Graph Modelling; governance; innovation.

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## Introduction

This article examines the conditions under which individuals are likely to engage with other participants in learning activities during collaborative processes of ‘innovation’ in the public sector. Learning is in this study understood as a behavioural activity of a single individual to get a better understanding of another person’s point of view, whereas innovation is interpreted as, ‘creative search processes used to develop and realise new ideas and solutions that radically transform the way in which we are imagining and doing things in the public sector’ (Ansell and Torfing, 2014: 4).

In theory, collaborations, and in particular learning activities among participants of collaborations, are expected to boost innovation, as more stakeholders and thus more knowledge, information and experiences are incorporated into policy-making processes (Ansell and Torfing, 2014: 10). Yet, recent studies show that in practice not all individuals have the same propensity to engage with others in learning practices during innovation processes; thereby undermining the innovative capacity of collaborations (Keast and Waterhouse, 2014: 156). Hence, we address the following research question: Why are individuals more likely to engage in learning practices with some participants and not, or to a lesser extent, with others during collaborative processes of innovation?

So far, not many studies have explicitly tackled this research question (Ansell and Torfing, 2014: 238-239). Instead, scholars have mainly used the case study method to look at aspects of group-learning in collaborative processes of innovation (e.g. Montin, Johansson, and Forsemalm, 2014; Waldorff, Kristensen, and Ebbessen, 2014; Bressers, 2014). Within these group-level analyses, ‘learning’ is conceptualized as an emergent property of the collective, instead of an accumulation of dyadic learning activities between individuals in the collaboration. As such, the collaborative innovation literature has offered explanations for how (an absence of) learning in collaborations affects group-level outcomes and results (in terms of goal achievement, public value, etc.), but has failed in explaining the differences in learning manifestations *between* individuals in collaborations (Stevens and Verhoest, 2016: 7).

This lack of scholarly attention to the learning activities of individuals in collaborations is striking. Most importantly, it means that we have little knowledge about what explains emergent learning interaction patterns between individuals in collaborative innovation processes, how these learning interaction patterns impact the development and realization of public sector innovations, and how managers can facilitate individual learning interactions to foster the development of innovations in collaborations.

To properly understand the value of ‘collaborations’ as vehicles for the promotion of innovations in the public sector, we need to further explore what determines that individuals engage in, or refrain from, practices of learning, with other individuals in collaborative innovation processes. From thereon, recommendations can be drafted about how learning interactions in collaborations can be accommodated through network management.

Therefore, to contribute to the collaborative innovation literature, this article examines the learning interactions between twelve civil servants (hereafter referred to as ‘representatives’)

of different public sector organizations within a Flemish administrative network regarding the development of the Flemish Sustainable Spatial Planning Plan (FSSPP). The radical change envisioned by the FSSPP means it can be regarded as a deliberate collaborative policy innovation process.

To make inferences about the learning interactions among these representatives, the statistical network methodology of Exponential Random Graph Modelling (ERGM) is used. Up and until now, ERGMs have not been frequently applied in public administration literature or governance studies (Stevens and Verhoest, 2016). The methodology has a longer tradition in the fields of conflict management and peace studies (Cranmer, Desmarais and Menninga, 2012), disease studies (Rolls et al., 2013), and neurosciences (Teleford et al., 2011).

Specifically, ERGM is a methodology that aims to explain tie-formation (Goodreau, 2007). In laymen's terms, this means that the methodology is capable of drawing inferential conclusions about why individuals have the tendency to connect (e.g. learning) with some people and not with others in collaborations. This outcome variable (i.e. tendency to connect or not), and thereby the overall purpose of the methodological tool, thus makes the ERGM-methodology well-equipped for exploring and analysing the individual learning dynamics in the administrative network.

We continue as follows. First, we discuss how the concept of learning is perceived in this study. Then, the theoretical expectations are presented. Subsequently, the case, data, and chosen methodology are reviewed. In the results section, we present the findings of the ERGM-analyses. The article ends by reflecting on the main observations that can be drawn from this study with regard to learning activities between individuals in collaborations and possible management strategies which can help to facilitate these learning interactions.

## **Learning as a specific form of actor behaviour**

For this study, learning is understood as: a specific form of actor behaviour. This definition enables us to examine how actors behave differently in relation to one another. Analytically, actor learning behaviour is regarded as distinctive from other, more self-referential, forms of actor behaviour, such as avoidance, defiance or manipulation (Oliver, 1991: 151). We anticipate 'learning actors' have a more positive attitude towards a trust-based circulation and cross-fertilization of creative ideas across organizational boundaries and to be more open to the formation of joint ownership and responsibility for the selection and implementation of innovative policy solutions (Sørensen and Torfing, 2011).

Scholars belonging to the learning- and psycholinguistic sciences have done more research on how 'learning actors' behave in collaborations. Van den Bossche and colleagues (2011: 298), for example, developed, tested and validated a measurement scale that captures 'learning behaviour' in collaborative work environments as a distinctive analytical term. In their article, Van den Bossche et al. (2011) ascribe nine different behavioural manifestations, clustered into three components, to the concept of 'learning behaviour'.

First of all, they argue that 'learning actors', (1) listen carefully to the contributions of others in discussions and deliberations, and (2) ask questions of clarification if something is unclear

about the frames of reference of other participants in the collaboration.’ They regard this cluster of behavioural manifestations as the socio-cognitive behaviour<sup>15</sup> of ‘construction’ (2011, p. 287). This sort of socio-cognitive behaviour helps individuals in collaborations to get an understanding of each other’s ways of looking at the problem situation.

The second cluster of behavioural learning manifestations is considered as the socio-cognitive behaviour of ‘co-construction’. This entails that learning actors, ‘(3) draw conclusions from the ideas that are being discussed, (4) elaborate on each other’s information and ideas, and (5) complement their initial frame of reference with information and ideas that follow from the interactions with the other actors in the collaborative arrangement.’

However, it is not enough that actors merely gain an understanding of each other’s way of looking at a problem situation and, through dialogue and reflection, refine their own frames of reference, if a group wants to generate innovative policy solutions (Alpay, Giboin and Dieng, 1998). According to Van den Bossche et al. (2011: 287), discrepancies in understanding are only likely to be overcome if the divergence in meaning leads to deep-level processing and contestation of the diverse information and viewpoints among participants in a collaboration.

This requires that ‘learning actors’, ‘(6) share the relevant information and ideas they have, (7) handle differences of opinions by addressing them directly, (8) verify opinions and ideas of other stakeholders by asking them critical questions, and (9) act upon comments of other stakeholders on their own perceptions and ideas.’ These behaviour manifestations combined are by Van den Bossche et al. (2011: 298) understood as the socio-cognitive behaviour of ‘constructive conflict’, and account for the third cluster of behavioural manifestations that makes the concept of ‘learning behaviour’ distinctive from other forms of actor behaviour.

In this study, an adapted version (see table 4) of the scale of Van den Bossche et al. (2011) is used to ask representatives of the organisations that participated in the collaborative process for the development of the FSSPP about who of the other representatives in the collaboration behaved in the interactions with them as ‘learning actors’. In this way, we are able to gain a notion from who (i.e. all ‘other’ possible representatives *j*) each of the representatives *i* tried to learn (figure 6). The representatives were not asked to indicate in relation to whom they showed learning behaviour, to avoid that a ‘positive’ self-reporting would error the results.

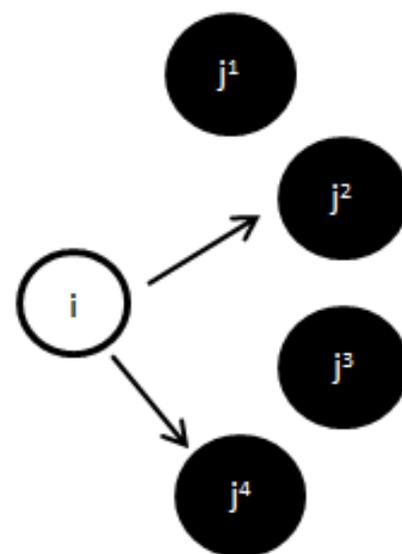


Figure 6: Learning activities of representative *i* with some possible representatives *j* (*j*<sup>2</sup> and *j*<sup>4</sup>), but not with others (*j*<sup>1</sup> and *j*<sup>3</sup>).

<sup>15</sup> Socio-cognitive behaviour is in the cognitive psychology literature understood as a form of human interaction and information process (Gioia and Sims, 1986), whereby participants through dialogues and discussions with other people acquire more knowledge about the problem situation which, in turn, allows them to adapt or refine their original interpretation of the problem addressed.

In the next sections, we discuss theoretical arguments which are tested with the ERGM methodology to explain why a certain representative  $i$  is more likely to show (signs of) learning behaviour in relation to some representatives  $j$  than others in the collaborative innovation process.

### **Advocacy Coalition Framework (ACF) and belief homophily**

Central to Sabatier and Jenkins-Smith's Advocacy Coalition Framework (ACF) theory is Herbert Simon's (1955) notion of bounded rationality; which assumes that individuals are cognitively limited in processing all information they encounter in decision-making processes. Due to these cognitive limitations, individuals use shortcuts, or heuristics, to simplify and filter the incoming information. According to Calanni et al. (2014: 903), 'they do this by filtering the incoming information based on how it lines up with their own beliefs and precognitions, so as to reduce the mental discomfort (also referred to as 'cognitive dissonance' [Festinger, 1957]) new and often discordant information create'.

As such, the ACF asserts that individuals have the tendency to focus on opinions and information that confirm their pre-existing expectations and beliefs rather than insights that contradict these (Weible and Sabatier, 2005). Hence, the first hypothesis of this study is that in collaborative processes of innovation, representatives of organizations will show more learning behaviour towards representatives of organizations who hold rather similar views and beliefs (i.e. belief homophily).

### **Social Capital Theory and trust**

The Social Capital Theory (SCT) identifies 'trust' as an influential determinant for starting, maintaining or terminating (micro-level) relationships with other individuals (Agranoff and McGuire, 2001; Lubell, 2007). Trust is a relational concept (Levi and Stoker, 2000) and can be understood as a subjective interpretation of a *trustor* that a *trustee* has a commitment to act in the best interest of the trustor on the basis of moral values (i.e. values that align incentives, a shared definition and value of promise keeping, and a general concern for the welfare of the trustor) and competence (i.e. trustworthy actors have the aptitude to act in a trustworthy fashion).

According to Ferguson and Stoutland (1999: 44), trust ensures that network members do not betray or exploit each other, but instead show collegiality in their interactions. The latter makes a trustor less vulnerable in inter-organizational collaborations, as the trustor knows upfront that the trustee will show little self-maximizing behaviour in relation to her or him (Calanni et al., 2014: 905). Given these insights from the SCT-framework, the second hypothesis of this study is that in collaborative processes of innovation, representatives of organizations will show more learning behaviour towards other representatives of organizations whom they trust.

### **Tie-interdependence effects**

In collaborations, individual behaviour is also influenced by the very presence or absence of relationships among other participants, and their behaviours, in the collaboration (Lubell et

al., 2012). These influences, which are structural effects inherent to the collaboration itself, are in the social network analysis literature understood as ‘tie-interdependence effects’. In this study, three tie-interdependence effects are included: (1) outdegree, (2) reciprocity, and (3) transitivity.

### **Outdegree**

Individual learning behaviour is not always apparent in collaborative policy innovation processes. In fact, earlier studies in the collaborative innovation literature have noted that individuals may experience quite some discomfort in participating, socializing and learning in innovation processes (Bason, 2014: 222). Individuals do often not know exactly what to expect. The little certainty they have in the development-phase is that the innovation is meant to be a game-changer and radically alter the way in which a policy problem is addressed and services, competences and budgets are organized and distributed among the multitude of organizations. Hence, individuals can be very anxious and hesitant during collaborative innovation processes to engage in interactions with network alters (Stevens and Verhoest, 2016).

Following these considerations, it is expected that the basic tendency of representatives to show signs of learning behaviour towards others representatives in collaborative innovation arrangements is relatively *low*. Yet, representatives that intrinsically (i.e. by nature) connect more easily with other representatives are more likely to possess many outgoing ties and are, as such, better able to acquire (and influence) knowledge and information in collaborative innovation processes. To test for this hypothesis, we included the tie-interdependence effect of *outdegree* in the ERGM analysis, as it represents the basic tendency of individuals to have ties at all, and in a decision-theoretic approach, its parameter could be regarded as the balance of the benefits and costs of an arbitrary<sup>16</sup> tie (Snijders, Van de Bunt and Steglich, 2010: 10).

### **Reciprocity**

The concept of *reciprocity* determines whether individuals forge dyadic learning relationships (Lee, Lee, and Feiock, 2012: 554-555). In this study, reciprocity entails individuals who *receive* information, advice or knowledge through (learning) activities return the favour to the sender in equivalent form.

The collaborative (policy) innovation literature suggests that *learning actors* have a positive attitude towards a trust-based circulation and cross-fertilization of creative ideas across organizational boundaries, sectorial borders or even levels of government (Sørensen and Torfing, 2011). Further, collaborative innovation scholars (e.g. Ansell and Torfing, 2014: 11) have argued that, ‘intense learning interaction between individuals holding different perspectives or knowledge can generate new insights and strengthen the sense of possibility for establishing a (policy) innovation.’ Hence, the reciprocity parameter will reveal to what extent pairs of individuals had the *intention* to learn from each other’s points of view in the collaboration and, as such, contribute to the development of new and creative policy solutions.

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<sup>16</sup> Arbitrary meaning here that the other actor *j* (‘receiver’) has no characteristics or tie pattern making him/her especially attractive for actor *i* (‘sender’).

The expectation is that when an individual decides to learn from another participant, most of the time the learning activity will (over time) turn into a dyadic activity. There are two interrelated reasons for this. First of all, increased discussions on each other's problem perceptions, objectives, and interests allow individuals to become more acquainted with both their intentions in the collaboration (Koppenjan and Klijn, 2004: 127). Such an increased awareness thus makes it easier to develop a *modus vivendi* for dealing with their differences in discussions on a policy innovation. Second, a mutual (learning) exchange relationship helps establish practical guidelines to expand social clustering by creating a 'shadow of the future'<sup>17</sup> in which defection by one individual can be punished by future defection (Axelrod, 1984), thus enabling credible commitments to develop and sustain (Lee, Lee and Feiock, 2011: 554-555).

### Transitivity

The third tie-interdependence term is the *transitivity* effect. Transitivity is within the social network analysis literature better known as the 'friends of friends become friends effect' or in graph-theoretic terminology: two-paths tend to be, or to become, closed. Within dialogue and learning situations, like processes of collaborative innovation, the concept of *transitivity* can best be interpreted as the tendency of an individual to learn from persons whose 'value' to learn from has been scrutinized by others from who the individual in question already is learning. In the case of figure 7, this would imply that person *i* forges a learning tie with person *k*, because person *j* from who person *i* already is learning, has positively scrutinized the learning value of person *k*.

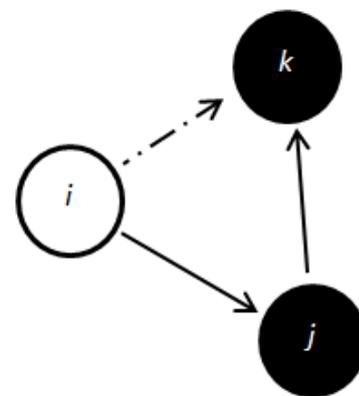


Figure 7: Transitive learning relationship of actor i.

There are various reasons why an individual would forge a transitive learning relationship. First of all, it allows an individual to increase the amount of knowledge it (already) obtained through dialogues with other participants in the collaboration. Second, and perhaps most important, transitive learning relationships enable the formation of 'learning alliances' in collaborative innovation networks. With 'learning alliances', we mean a social clustering of actors that together engage in creative search processes to develop comprehensive policy innovations for the targeted policy problem. In this sense, the transitivity effect can be regarded as the most basic level of a tightly clustered network (Lee, Lee, and Feiock, 2011: 556). Hence, for the analyses, it is expected that when a representative is motivated to innovate with other representatives (and their organizations) involved, it will forge transitive learning relationships.

### Control variables

<sup>17</sup> The shadow of the future is a concept that stems from the game theory literature. Essentially it expresses the idea that people behave differently when they expect to interact with someone repeatedly over time. The common take on this is that the shadow of future is *good for cooperation*, as it allows individuals to escape prisoners' dilemma situations by using conditional retaliation strategies.

In the analyses, six control variables are included to not invalidate the explanatory power of the *learning tie-formation* hypotheses. Specifically, the study controls for the position of the chairman in the collaborative network, the different types of the representatives' organizations (i.e. agencies or departments), whether each representative found the activities of the collaborative process meaningful, whether the representatives had support from their minister, and the power balance between representatives in the collaborative process on the basis of the perceived necessity of the involvement of a representative's organization by each of the other participants. The collaborative process under study has a longer tradition than the episode which is analysed. Some of the representatives were already for a longer time involved. Therefore, in the analyses, the number of years each representative was a part of the collaboration is also controlled for.

## **The case**

We now enter the empirical case examining the learning interactions in a Flemish administrative network between twelve representatives from different departmental organizations and agencies. These departmental organizations and agencies belonged to different policy sectors as a means to capture the cross-cutting nature of spatial planning policies. The collaborative network can be regarded as a top-down mandated administrative network, which was allowed by the political leaders to develop a radical new policy strategy that would be better able to tackle problem issues within the field of spatial planning, like accessibility of infrastructure, cultural heritage preservation, social and economic cohesion, sustainable development, etc.

There was some pressure from 'above' in the hierarchy to learn, as the policymakers expected a long-list of intertwined policy strategies from the involved network members. The only way to achieve intertwined policy solutions, was if the network members were open and willing to learn from the transformative ideas and solutions of network alters, and through this social interaction update their own personal beliefs regarding the relevant policy problems and possible solutions,

The administrative network was already established in 2011 – but this study specifically zooms in on an 'innovation episode' between December 2015 and February 2016. During this episode, the members of the administrative network deliberately tried, during general meetings and in bilateral exchanges outside the general meetings, to develop a new Flemish Sustainable Spatial Planning Policy (FSSPP). The aim of the members of the collaboration was not to generate more or less the same kind of policy solutions, but rather about changing the form, content, and repertoire of policy actions, and even transforming the underlying problem understanding, objectives and program theory of the conventional governmental strategies (i.e. a radical transformation). This aim aligns with what Sørensen and Torfing (2011) regard as an innovative policy change. For that reason, we perceive the aim of this process in the administrative network as a collaborative policy innovation process.

## **Methodology**

The data collection proceeded in two steps. First, the representatives were asked to fill out a survey with standardized questions about the interactive dynamics within the FSSPP network.

Second, the respondents were interviewed to ask follow-up questions or questions of clarification about their responses to the standardized survey questions (Dawson, 2002). All twelve members were surveyed and interviewed, which means that this study has a response rate of hundred percent.

Table 4 provides an overview of the standardized questions (with the possible answer categories) of the survey. Furthermore, it is indicated – if, possible and necessary – for each question on which (validated scales of) earlier studies the operationalisations are based. The standardized survey questions were pretested by civil servants who were familiar with the administrative network and the dynamics of the policy sector of spatial planning. This pretesting led, for example, to a withdrawal of two survey questions about the two other dimensions of the trust variable of Mayer and Davis (1999), i.e. ability- and integrity-based trust, as these questions were regarded as being too personal and too sensitive.

In several of the questions, the phrase ‘list up to five representatives from within the network’ is used. Such a phrase makes the interview question a so-called ‘name-generator network question’ (Lubell, Robins and Wang, 2014: 12). Name-generating survey questions help to minimize the burden for respondents to give answers to questions about (the behaviour of) their network alters (Marin and Hampton, 2006).

To elucidate, in the survey respondents were not only asked about the learning behaviour of network alters in relation to them (i.e. dependent variable), but also about other aspects of the collaboration and the contribution of every network alter therein (e.g. issues of trust, belief homophily, etc.). Hence, a survey about the composition, dynamics, and interrelations among actors in a collaboration can easily become a time-consuming activity. As such, a name-generating question, which compels an interviewee to only name a maximum number of network alters (though, the respondent is allowed to name less network alters), helps to reduce the survey time and thereby creates ‘extra time’ to ask more survey questions (Marin and Hampton, 2006: 5).

<b>Concept:</b>	<b>Standardized question:</b>	<b>Inspired by the work of :</b>
<b>DV: Individual learning behaviour</b> <b>(3 socio-cognitive behaviours)</b>  <i>Construction:</i>  <i>Co-construction:</i>  <i>Constructive conflict</i>  <i>On the basis of the responses to these questions the variables of outdegree, reciprocity and transitivity are also constructed.</i>	<i>Could you please list up to five representatives who most frequently;</i>  <i>... asked questions of clarification if something you said was unclear to them;</i>  <i>.... elaborated on the information and ideas you exchanged;</i>  <i>... shared the relevant information and ideas they have<sup>18</sup>?</i>	Van den Bossche et al. (2011).
<b>H1: Belief homophily</b>	<i>Could you please list the representatives who had rather similar beliefs about the problem situation and possible ways to tame it?</i>	Calanni et al. (2014: 910).
<b>H2: Benevolence-based trust</b>	<i>Could you please list up to five representatives who did go out of their way to bring the collaboration to a good end?</i>	Mayer and Davis (1999).
<b>C1: Support from the minister</b>	<i>On a scale from 1 (“totally not agree”) to 10 (“totally agree”) could you please indicate to what extent the development of the FSSPP was a top-priority for your minister?</i>	-
<b>C2: Type of organization</b>	<i>Do you work for a departmental organization or an agency?</i>	-
<b>C3: Chairman</b>	<i>Who was the chairman of the collaboration?</i>	-
<b>C4: Power balance in the network</b>	<i>Could you please list up to five organizations whose involvement you considered as ‘very necessary’ to get a hold on the policy problem?</i>	Scharpf (1978).
<b>C5: Years representative</b>	<i>For how many years have you been a representative for your organization in this network?</i>	-
<b>C6: Personal meaningfulness</b>	<i>On a scale from 1 (“not so much”) to 10 (“very much”), could you please indicate to what extent you expect that this collaboration in the field of spatial planning will eventual make it easier for you to execute your daily administrative work?</i>	Tummers (2012)

**Table 4: Standardized interview questions.**

<sup>18</sup> For the analyses, the adjacency matrix of the answers to these three questions was transposed, to ensure that the rows of the adjacency matrix represent the behavioural action of the sender and the columns indicate who received the behavioural activity.

Yet, apart from ‘minimizing the response-burden reasons’, there is another, more deliberate, reason – especially, for the dependent variable – why for this study was decided to use such a name-generating technique for collecting data. Namely, the learning literature suggests that it is extremely difficult for both scholars as well as respondents, to observe and pinpoint ‘learning’ or ‘learning behaviour’ in practice (*therefore* van den Bossche et al., 2011 inter alia focus on ‘learning behaviour’ instead of the cognitive process of learning). A person can, for example, ask questions of clarification but this does not have to entail that this person really tries to ‘learn’ from the other person he or she engages with.

Therefore, to ensure that the identified ‘tie-formations’ in the analyses really represent behavioural learning manifestations instead of ordinary interactions, the respondents were asked to indicate their most *substantive* learning ties (i.e. up to 5 network alters), and distinguish these from other, more ‘weak’, (learning) ties (Granovetter, 1973). Hence, a tie in this research is specifically understood as ‘a *substantive* behavioural effort of a representative to learn from another representative by showing socio-cognitive behavioural signs of construction, co-construction and/or constructive conflict in its interactions towards this other representative.’

Eventually, the survey and additional information from the follow-up interviews were coded and stored the data in a CSV-Excel file. Subsequently, the CSV-Excel file was used in the statistical program of *R* to perform the ERGM analyses. The results of the analyses are presented in the next sections.

## Results

In this results section, for each dimension of the individual learning behaviour variable, a model is presented which proved to be best in capturing the emergent socio-cognitive behavioural interaction patterns in the FSSPP network. These models were selected on the basis of a specific analysis and model fit strategy that is commonly used in ERGM studies (Goodreau, 2007). In some of the presented models, not all predictor variables are included, as models including these factors did not comply with the model selection requirements. Other predictor variables, like the in-degree popularity effect, were included in some of the models to produce a better model fit. For a more detailed account of the analyses, research decisions and model selections for this study, as well as the replication data, please go to the appendix or this article’s Harvard Dataverse (Stevens, 2017): [doi:10.7910/DVN/MTELU8](https://doi.org/10.7910/DVN/MTELU8).

### **Factors influencing the socio-cognitive behaviour of ‘construction’**

Table 5 presents the parameter estimates, standard errors and p-values of the model that best *fits* the data regarding the socio-cognitive behaviour of ‘construction’. It turns out that tie-formation, in terms of asking questions of clarification to another representative, is (well) explained by the following significant factors: reciprocity, in-degree popularity, chairman, and trust. At the level of  $p=0.1$ , the parameter of out-degree is also significant. The parameter estimates (i.e. the thetas) of the model are presented in log-odds. On the basis of these parameter estimates the odds ratio for each of the significant variables can be calculated by using the formula  $e^{(\log\text{-odds})} = \text{odds ratio}$ .

	$\theta$	(se)	P value
<i>Independent variables</i>			
<b>Reciprocity</b>	1.2951	0.6437	0.04643*
<b>Out-degree(<math>\alpha=0.7</math>)</b>	-0.3864	0.2247	0.08804·
<b>Transitivity</b>	0.1517	0.1201	0.20923
<b>In-degree popularity</b>	-2.6987	1.0632	0.01239*
<b>Belief homophily</b>	0.1393	0.5012	0.78156
<b>Trust</b>	1.5158	0.5681	0.00867**
<i>Control variables</i>			
<b>Years representative</b>	0.1796	0.1144	0.11912
<b>Personal meaningfulness</b>	-	-	-
<b>Top-priority Minister</b>	-	-	-
<b>Chairman</b>	-4.5929	2.0884	0.02974*
<b>Type of organization</b>	-	-	-
<b>Actor importance</b>	-	-	-
<i>Goodness of fit statistics</i>	LL=-61.43734, df=10, AIC=142.9 BIC=171.7		

**Table 5: Results of ERGM analysis on the dimension of 'construction'.**

The odds ratio of the variable of 'reciprocity' equals  $e^{1.2951} = 3.65$ . As this value is above the 1, the odds ratio tells us that within the FSSPP network, representatives were eager to ask questions of clarification about the contribution of a network alter, if this network alter showed a similar kind of learning behaviour in relation to the network ego.

The variable of in-degree popularity has a negative theta. As Snijders, Van de Bunt and Steglich (2010, p. 48) explain, 'if the parameter estimate of this effect is positive, individuals with a higher in-degree are more attractive for others to send a tie to'. In the analysis, the opposite is the case; which means that at a certain point popular representatives, in terms of receiving many questions of clarification by many different actors, are less attractive to send an outgoing learning tie to. This suggests that in the FSSPP network at a certain point a saturation effect occurs to the number of clarification questions a representative receives from other representatives involved. Or stated differently, there is a point where all aspects of the contribution of a representative are fully understood by the other representatives in the network due to the number of clarification questions a representative already received. When this is the case the network member is less likely to receive more questions of clarification.

The odds ratio of the variable of 'chairman' equals  $e^{-4.5929} = 0.01$ . In the analysis, the base of this variable was set at 1 – which means that the 'chairman' was used a reference category to compare the actor learning behaviour of ordinary representatives in the network to. Hence, the odds ratio shows that the odds of a chairman asking questions of clarification towards another representative in the network compared to not asking questions of clarification are  $1/e^{-4.5929} = 98.78$  times more than for an ordinary representative in the collaboration.

Lastly, the variable of 'trust' has an odds ratio of  $e^{(1.5158)} = 4.55$ . So, the analysis shows that if a representative experiences another representative as being trustworthy, the change in the odds of asking questions of clarification towards this other representative (rather than not asking questions of clarification) is 4.55. This reveals that in the FSSPP network representatives were more likely to ask another representative questions of clarification if he or she believed that the other representative would go out of his or her way to bring the collaboration to a good end.

### Factors influencing the socio-cognitive behaviour of 'co-construction'

	$\theta$	(se)	P value
<i>Independent variables</i>			
Reciprocity	-1.93497	0.90238	0.03396*
Out-degree( $\alpha=0.7$ )	-	-	-
Transitivity	-0.39381	0.28574	0.17062
Belief homophily	-	-	-
Trust	-	-	-
<i>Control variables</i>			
Years representative in network	0.46670	0.18594	0.01336*
Personal meaningfulness	0.34327	0.15296	0.02659*
Top-priority Minister	0.06834	0.11448	0.55162
Chairman	-0.82605	0.90887	0.36518
Type of organization	-0.67407	0.55771	0.22909
Actor importance	-	-	-
<i>Goodness of fit statistics</i>	LL=-67.38364, df=8, AIC=150.8, BIC=173.8		

Table 6: Results of ERGM analysis on the dimension of 'co-construction'.

Table 6 presents the parameter estimates, standard errors and p-values of the model that best fits the data regarding the emergent socio-cognitive behavioural interaction patterns of 'co-construction' in the FSSPP network. Three significant parameters seem to explain for why a representative in the FSSPP network elaborates more on the information and ideas of some representatives in the collaboration, and not, or to a lesser extent, on the information and ideas of others.

First of all, the variable of reciprocity comes up as a significant factor. The odds ratio of the variable equals  $e^{(-1.93497)} = 0.144$ . As this value is below the 1, the odds ratio indicates that within the FSSPP network, representatives were not very willing to build on a network alter's information and ideas, if this network alter showed such a kind of behaviour towards the representative in question. This finding suggests that deep-level processes of reflection between pairs of representatives in the FSSPP network, by building on each other's information and ideas, was relatively rare.

A second significant variable is the number of years a representative has been a member of the FSSPP network. The odds ratio equals  $e^{0.46670}=1.595$ ; which means that as this variable increase by one unit (i.e. a year), the change in odds of elaborating on the information and ideas of another representative in the network (rather than not elaborating) is 1.595. In short, the longer a representative is a member of the network, the higher the likelihood in odds that this representative elaborates on the information and ideas provided by another representative in the collaboration. Perhaps, network members that have been for a longer time part of the network, are more accustomed to the institutional regime of the network, and therewith better able to adapt their behaviours to the expected (and existing) norms and values for learning and collaboration.

Lastly, the variable of personal meaningfulness proves to be a significant parameter. It has an odds ratio of  $e^{0.34327}=1.410$ . The odds ratio indicates that the more a representative believes that the collaboration is beneficial for its daily administrative routines, the higher the likelihood in odds that he or she will elaborate on the information and ideas of network alters in the collaborative innovation arrangement.

### Factors influencing the socio-cognitive behaviour of 'constructive conflict'

	$\theta$	(se)	P value
<i>Independent variables</i>			
Reciprocity	1.39863	0.62276	0.0265*
Out-degree( $\alpha=0.7$ )	-0.04548	0.78312	0.9538
Transitivity	-	-	-
Belief homophily	1.29691	0.50046	0.0107*
Trust	0.19043	0.49341	0.7002
<i>Control variables</i>			
Years representative in network	0.19129	0.10815	0.0794
Personal meaningfulness	-	-	-
Top-priority Minister	-	-	-
Chairman	-0.70345	0.60796	0.2495
Type of organization	-	-	-
Actor importance	0.89136	0.44464	0.0472*
<i>Goodness of fit</i>	LL=-63.48185, df=9, AIC=145, BIC=170.9		

Table 7: Results of ERGM analysis on the dimension of 'constructive conflict'.

The final model of this research focusses on the emergent interaction patterns in the FSSPP network regarding the socio-cognitive behaviour of 'constructive conflict'. The respondents were asked to indicate who of the other representatives in the network were most open in giving information and ideas to them. Table 7 presents the parameter estimates, standard errors and p-values of the model which best *fits* this relational data.

Once again the reciprocity variable turns out to be significant. The odds ratio equals  $e^{1.39863}=4.045$ . Hence, the odds ratio indicates that representatives in the FSSPP network were very open in sharing relevant information and ideas with a network alter if this network alter showed a similar kind of learning behaviour.

Another significant parameter is the variable of belief homophily; it has an odds ratio of  $e^{1.29691}=3.658$ . As this value is greater than 1, this odds ratio shows that within the FSSPP network, actors were eager to share ideas and information with representatives who held rather similar views and beliefs about the policy situation and possible ways to tame it.

The last significant effect of this analysis is the variable of actor importance. The theta has a value of 0.89136, which means that the odds ratio equals 2.438. Thus, a representative in the FSSPP network was more likely to share information and ideas with a network alter, if the involvement of the organization of the network alter was regarded by the representative as ‘very necessary’ to tackle the policy problem.

## Discussion and conclusions

	Construction	Co-construction	Constructive conflict
<b>H1: Belief homophily</b>	R	R	A
<b>H2: Trust</b>	A	R	R
<b>H3: Out-degree</b>	R (A at p=0.1)	R	R
<b>H4: Reciprocity</b>	A	A but neg. direction	A
<b>H5: Transitivity</b>	R	R	R

**Table 8: Results of the ERGM analyses; R=reject hypothesis; A=accept hypothesis.**

Research on the micro-level learning dynamics in processes of innovation in collaborations has so far been quite scarce. Therefore we set out to study the learning dynamics between representatives of public sector organizations in an administrative network regarding the development of the Flemish Sustainable Spatial Planning policy. Thanks to ERGM analyses, we generated several insights into the underlying social processes and tie-formation mechanisms that generated the emergent learning activities in the collaborative innovation process.

The tie-formation mechanisms, however, often differed for the three behavioural learning manifestations. Table 8 provides an overview of the hypotheses that can be accepted or rejected on the basis of the ERGM analyses. Significant control variables were: in-degree popularity, the role of the chairman, actor importance, personal meaningfulness, and the number of years a representative was a member of the network.

On the whole, these findings provide us with three particular observations about why individuals are more likely to engage in learning practices with some participants and not, or to a lesser extent, with others during collaborative processes of innovation. These three observations further allow drafting recommendations about how managers can spur dialogue and learning activities between participants of collaborative processes of innovation.

First of all, transformative learning processes are not something straightforward. Recall, these are dialectic processes whereby joint image building and cognitive change occurs within a group of individuals (instead of merely between two representatives) as a result of their interactions. In none of the analyses, the transitivity feature contributed substantially to model fit; which indicates that no tightly clustered learning alliances were formed in the collaborative network. In addition, the significant belief homophily factor shows that representatives in the FSSPP network were much more open in sharing information and ideas with network members who held similar beliefs, compared to representatives that perceived the problem situation quite differently.

These results find much resonance in the network governance and collaboration literature. Henry, Lubell and McCoy (2010), for example, find in their ERGM study on the case of the California Regional Planning strong support for the aversion aspect of the ACF belief homophily hypothesis. More specifically, their results show that divergent belief systems consistently have a strong negative effect on the formation of collaborative ties. Similarly, Weible and Sabatier (2005) have shown that in situations where policy core beliefs are contested, ally networks tend to correlate with shared beliefs. Also, the belief homophily thesis was supported in a study on environmental conflicts by Ingold (2011). Lastly, Calanni et al. (2014) reveal in their study on nine collaborative aquaculture partnerships that, 'in collaborative partnerships where policy core beliefs are threatened, network members will coordinate more closely with other members who share their views on major policy issues.'

Therefore, in line with these findings, one recommendation is that managers of collaboration processes of innovation foster learning activities particularly between 'opposing representatives', if they want to develop policy solutions that move beyond existing practices and routines. Agger and Sørensen (2016: 5) suggest that this can, for example, be done by translating between different perceptions and experiences or reformulating conflict into dilemmas that through bargaining and negotiation can be settled. Ultimately, such a management approach activates actors to get to know each other and from thereon expand, with more background and appreciation for the others' points of view, their group activities to develop an innovative policy plan.

The second observation is that exemplary, or good, learning behaviour is rewarded in collaborative innovation processes. That is to say, the analyses reveal that representatives were more likely to ask questions of clarification to network members that did go out of their way to bring the collaboration to a good end. In addition, the representatives of the FSSPP network were likely to 'return the favour', if a network alter asked questions of clarification or shared relevant information and ideas with them.

These findings are similar to those of scholars who empirically studied the concept of 'collaborative costs' (Agranoff, 2006; Bardach, 1998; Thomas, 2003). They commonly claim that there has been much emphasis on the benefits that emerge from collaborative efforts. However, collaboration also brings along certain 'costs', e.g. time and personnel costs resulting from a protracted decision-making process as a consequence of the unwillingness, strategic-ness or risk-averseness of actors involved (Agranoff, 2006). Following this line of thought, it can be assumed that good behaviour reduces the amount of collaborative

'transaction' costs in networks, and makes actors more willing to engage with a representative who shows such a kind of exemplary learning behaviour.

For that reason, managers of collaborative processes of innovation are advised to reward and celebrate individuals who show exemplary learning behaviour and set norms in the collaborative arrangement that see creativity, collaboration and learning not as barriers but as drivers for innovation (Ansell and Torfing, 2014, p. 10). Such a management approach canonizes the ability to make hard new choices as the road to success. In addition, it makes it easier for a group of actors to find a *modus vivendi* where the focus is on creating a 'collaborative advantage' (Kanter, 1994), instead of on the individual and organizational gains and losses.

The third, and final, observation is that in collaborative processes of innovation some representatives sit in positions where the involvement of their organization accrues power within the collective. To be more specific, from the ERGMs it becomes clear that representatives, who come from organizations which are regarded by others as 'very necessary' to tackle the policy problem, receive a lot of information and ideas from other representatives. To some extent this indicates that 'power' in collaborative innovation processes attracts information, and 'weaker' individuals 'strategically' try to influence the frames of 'powerful' representatives by providing them with information and ideas.

The latter is also something that Agranoff (2006: 61) noted. In his inductive study, including discussions with more than 150 public officials, he found amongst other things that 'despite the cooperative spirit and aura of accommodation in collaborative efforts, networks are not without conflict and power.' In a similar vein, Burt (1992: 67) reports in his study that, 'it appears that in networks actors occupy different role positions and carry different weights.' Hence, it would be wise that the manager of collaborative processes of innovation actively sees to it that in discussion and learning activities all participants' ideas and concerns are given enough weight to avoid that eventually in the discussions certain interests, concerns and ideas prevail over others.

There can, of course, be many other tie-formation effects at play in learning activities during collaborative processes of innovation, which require different management responses. For this study, just a few hypotheses were selected from the available scientific literature on micro-level actor processes to study the learning dynamics within a top-down mandated administrative network in the Flemish governmental context. Hence, we argue that it is important to substantiate the research on collaborative processes of innovation with more analyses on the micro-level learning processes in collaborations, including other predictor variables. Only then scholars can get a better view on under what circumstances collaborations can optimally be used as vehicles for the promotion of innovations in the public sector.

An alternative approach to consider for such analyses is incorporating the ERGM methodology in a mixed-method design (with interviews, document analysis or archive research), and supplement the statistical network analyses with qualitative data, to provide more context to the significant and non-significant parameters.

There are also certain limitations to this research. First, a major limitation is the use of the name-generating technique in the dependent variable. This definitely has its effects on the explanatory power of the predictor variables, and the way in which respondents answer to survey questions. However, the design of a study remains a balancing act between not burdening the respondent too much and collecting as much data as possible. Second, the ERGM methodology is limited by an inability to accommodate networks with valued ties. This means that the dependent variable in ERGMs must always be binary in nature: an actor has either a connection with another actor or not. Yet, recent extensions by, for example, Scott (2015) may provide the key to overcome this limitation.

After all, this research contributes to the scholarly debates about the use, design, and management of collaborations for fostering innovations, and encourages public administration researchers to add new equipment to their methodological toolbox by making use of relatively new research methods.

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## **References**

- Agger, A., & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*, doi: 10.1177/1473095216672500.
- Agranoff, R., & McGuire, M. (2001). Big questions in public network management research. *Journal of Public Administration Research and Theory*, 11(1), 295–326.
- Alpay, L., Giboin, A. & Dieng, R. (1998). Accidentology: An example of problem solving by multiple agents with multiple representations. This is a chapter. In M. W. van Someren, P. Reimann, H. P. A. Boshuizen, & T. de Jong (Eds.), *Learning with multiple representations* (pp. 152-174). Amsterdam: Pergamon.
- Ansell, C. & Torfing, J. (2014). Collaboration and design: new tools for public innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 1-19). New York, NY: Routledge.
- Axelrod, R. (1984). *The Evolution of Cooperation*. New York, NY: Basic Books Inc. Publishers.
- Bardach, E. (1998). *Getting Agencies to Work Together: The Practice and Theory of Managerial Craftsmanship*. Washington, DC: Brookings Institution Press.
- Bason, C. (2014). Design attitude as an innovation catalyst. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 209-229). New York, NY: Routledge.

- Bressers, N. (2014). The impact of collaboration on innovative projects; a study of Dutch water management. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 148-170). New York, NY: Routledge.
- Burt, Ronald. (1992). *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.
- Calanni, J.C., Siddiki, S.N., Weible C.M., & Leach, W.D. (2014). Explaining Coordination in Collaborative Partnerships and Clarifying the Scope of the Belief Homophily Hypothesis. *Journal of Public Administration Research Theory*, 25(1), 901-927.
- Cranmer, S.J., Desmarais, B.A., & Menninga, E.J. (2012). Complex Dependencies in the Alliance Network. *Conflict Management and Peace Studies*, 23(3), 279-313.
- Dawson, C. (2002). *Practical Research Methods. A User-Friendly Guide to Mastering Research Techniques and Projects*. Trowbridge, United Kingdom: Cromwell Press.
- Ferguson, R.F., & Stoutland, S. E (1999). Reconceiving the community development field. This is a chapter. In R. F. Ferguson & W. T. Dickens (Eds.), *Urban problems and community development* (pp. 33–76). Washington, DC: Brookings Institution.
- Festinger, L. (1957). *A Theory of Cognitive Dissonance*. Stanford, CA: Stanford University Press.
- Gioia, D.A., & Sims, H.P. Jr. (1986). Cognition-Behaviour Connections: Attribution and Verbal Behaviour in Leader-Subordinate Interactions. *Organizational Behaviour and Human Decision Processes*, 37(2), 197-229
- Goodreau, S.M. (2007). Advances in exponential random graph ( $p^*$ ) models applied to a large social network. *Social Networks*, 29(1), 231-248.
- Granovetter, M.S. (1973). The Strength of Weak Ties. *American Journal of Sociology*, 78(6), 1360-1380.
- Henry, A., Lubell, M., McCoy, M. (2011). Belief Systems and Social Capital as Drivers of Policy Network Structure: The case of California Regional Planning. *Journal of Public Administration Research and Theory*, 21(3), 419-444.
- Ingold, K. (2011). Network structures within policy processes: Coalitions, power, and brokerage in Swiss climate policy. *Policy Studies Journal*, 39(3), 435-459.
- Kanter, R. M. (1994). Collaborative advantage. *Harvard Business Review*, 72(4), 96-108.
- Keast, R., & Waterhouse, J. (2014). Collaborative networks and innovation: the negotiation-management nexus. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 148-170). New York, NY: Routledge.

Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.

Krivitsky, P. N. (2012). Exponential random graph models for valued networks. *Electronic Journal of Statistics*, 6(1), 1100-1128.

Lee, Y., Lee, I.W., & Feiock, R.C. (2012). Interorganizational Collaboration Networks in Economic Development Policy: An Exponential Random Graph Model Analysis. *Policy Studies Journal*, 40(3), 547-573.

Levi, M., & Stoker, L. (2000). Political trust and trustworthiness. *Annual Review of Political Science*, 3(1), 475–507.

Lubell, M. (2007). Familiarity breeds trust: Collective action in a policy domain. *Journal of Politics*, 69(1), 237–250.

Lubell, M., Robins, G., & Wang, P. (2014). Network structure and institutional complexity in an ecology of water management games. *Ecology and Society*, 19(4), 1-14.

Lubell, M., Scholz, J., Berardo, R., & Robins, G. (2012). Testing policy theory with statistical models of networks. *Policy Studies Journal*, 40(3), 351-374.

Marin, A., & Hampton, K.N. (2007). Simplifying the Personal Network Name Generator: Alternatives to Traditional Multiple and Single Name Generators. *Fields Methods*, 19(2), 163-193.

Mayer, R.C., & Davis, J.H. (1999). The Effect of the Performance Appraisal System on Trust for Management: A Field Quasi-Experiment. *Journal of Applied Psychology*, 84(1), 123-136.

Montin, S., Johansson, M., & Forsemalm, J. (2014). Understanding innovative regional collaboration: metagovernance and boundary objects as mechanisms. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 148-170). New York, NY: Routledge.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16(1), 145-179.

Rolls, D.A., Sacks-Davis, R., Jenkinson, R., McBryde, E., Pattison, P., Robins, G., & Hellard, M. (2013). Hepatitis C Transmission and Treatment in Contact Networks of People Who Inject Drugs. *PLOS*, doi: [10.1371/journal.pone.0078286](https://doi.org/10.1371/journal.pone.0078286).

Sabatier, P. A., & Jenkins-Smith, H. C. (1993). *Policy change and learning: An advocacy coalition approach*. Boulder, CO: Westview.

Scharpf, F.W. (1978). Interorganizational Policy Studies: Issues, Concepts and Perspectives. This is a chapter. In K.I. Hanf & F.W. Scharpf (eds.), *Interorganizational Policy Making: Limits to Coordination and Central Control* (345-370). London: Sage.

- Scott, T. A. (2015). Analysing Policy Networks Using Valued Exponential Graph Models: Do Government-Sponsored Collaborative Groups Enhance Organizational Networks. *Policy Studies Journal*, 44(2), 215-244.
- Simon, H.A. (1955). A behavioural model of rational choice. *The Quarterly Journal of Economics*, 69(1), 99-118.
- Snijders, T.A.B., Van de Bunt, G.G., & Steglich, C.E.G. (2010). Introduction to stochastic actor-based models for network dynamics. *Social Networks*, 32(1), 44-60.
- Sørensen, E., & Torfing, J. (2011). Enhancing collaborative innovation in the public sector. *Administration and Society*, 43(8), 842-68.
- Stevens, V., & Verhoest, K. (2016). A next step in collaborative policy innovation research: analysing interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-20.
- Stevens, V. (2017). Replication Data for: Stevens, V. (2017). Individual learning behaviour in collaborative processes of innovation. This is a chapter. In Dunlop, C.A, C.M Radaelli, & P. Trein, *Learning in Public Policy: Analysis, Modes and Outcomes*. Palgrave-MacMillan, Basingstoke, United Kingdom., doi:10.7910/DVN/MTELU8, Harvard Dataverse, V1, UNF:6:/CIOWcdoQrpiqKid/MSLTg==.
- Teleford, Q.T., Simpson, S.L., Burdette, J.H., Hayasaka, S., & Laurienti, P. (2011). The Brain as a Complex System: Using Network Science as a Tool for Understanding the Brain. *Brain Connectivity*, 1(4), 295-308.
- Thomas, C. W. (2003). *Bureaucratic Landscapes: Interagency Cooperation and the Preservation of Biodiversity*. Cambridge, MA: MIT Press.
- Tummers, L. (2012). Policy Alienation of Public Professionals: The Construct and its Measurement. *Public Administration Review*, 72(4), 516-525.
- Van den Bossche, P., Gijssels, W., Segers, M., Woltjer, G., & Kirschner, P. (2011). Team Learning: building shared mental models. *Instructional Science*, 39(3), 283-301.
- Waldorff, S.B., Kristensen, L.S., & Ebbesen, V.E. (2014). The complexity of governance; challenges for public sector innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 148-170). New York, NY: Routledge.
- Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Methods and Applications*. Cambridge, MA: Cambridge University Press.
- Weible, C., & P. A. Sabatier. (2005). Comparing policy networks: Marine protected areas in California. *Policy Studies Journal*, 33(1), 181–201.

## **Appendix: Information about research strategy and -analysis**

The ERGM methodology is a relatively new methodology in the social sciences. Therefore, we find it very important to be fully transparent about how we selected the best-fitting models, which are presented in this article. Hence, in this appendix we elaborate for each dimension of the dependent variable on the process we followed to get to the final results.

### **Strategy of analysis**

To analyse which predictor variables influence the distinct dimensions of the dependent variable, we followed an analysis strategy that is commonly used in ERGM studies (Goodreau, 2007). For each dimension, we started with a so-called Bernoulli/Erdős-Rényi model, which with only a single term (i.e. edges) captures the density of the network under study (Goodreau, 2007: 239). *Second*, we included the selected endogenous terms in the analysis. Within ERGM studies this is considered as a ‘reduced homogeneous realization-dependent model’ (idem: 240). By analysing the reduced homogeneous realization-dependent model, a researcher starts to get an idea of which properties inherent to the network itself influence the interactive dynamics between network members.

*Third*, we added the exogenous nodal covariates (i.e. amount of years representative, top-priority Minister, type of organization, personal meaningfulness, and chairman) to the model with the endogenous terms. *Fourth*, we analysed a model that includes the endogenous terms as well as the exogenous dyadic covariate effects (i.e. belief homophily, trust, and actor importance). If necessary, we tested a fifth model – a more optimized model of the dyadic covariate effects model – to ensure a better fit of the (final) explanatory model. Hence, for each dimension of the dependent variable we searched for four, or sometimes five, ‘best fitting models’ – and from this sample of models, we selected the model that was most capable in explaining the interaction patterns in the empirical data.

### **Model selection and goodness of fit**

Inspired by the work of Goodreau (2007: 238), we used three general approaches to examine the goodness of fit of the models. *First*, we checked for degeneracy and model convergence. A minimum requirement for a model to fit well is for estimation of parameters to converge on finite parameter values. It must also be non-degenerate, that is, not place all of its probability mass on a few networks entirely unlike the observed network, such as a full or empty network.

*Second*, we compared the Akaike Information Criterion (AIC) between models. Models that exhibit dyadic independence can be fit with standard logistic regressions, which yield a likelihood measure for the model. Those models that are dyad dependent must be fit with MCMC, which also yields an estimate of the likelihood. We used the given likelihood to calculate AIC in order to compare models; with a lower AIC implying a significant increase in model fit.

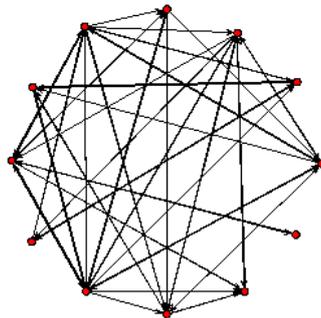
*Third*, we viewed the goodness of fit by plotting the model against higher order statistics. This approach is described in detail by Hunter et al. (2008). The logic entails generating new networks according to the probability distribution implied by the fit model. Because the normalizing constant is still present in the fit models, this must be done using the same MCMC approach employed during the estimation procedure. A statistic of interest is then calculated

on the original network and on the set of networks generated from the model, and these are plotted for comparison. If the original network is inconsistent with the networks generated from the model, this suggests that the structure of the network differs from those predicted by the model, and the model is not well fit. Multiple statistics can be compared visually to provide detailed information about the systematic ways in which the data and the model predictions differ.

For this third approach, the higher order network statistics we specifically used to compare the selected models to include: in-degree, out-degree, edge-wise shared partners, dyad-wise shared partners, and the minimum geodesic distance. Each of these higher-order network statistics was plotted on the log-odds scale for the sake of greater visibility across the covered range of values. What follows is a more elaborate discussion about how we selected the best fitting model for each of the 3 dimensions of the actor learning behaviour variable. We start with the model for the socio-cognitive behaviour variable of ‘construction’.

### **Factors influencing the socio-cognitive behaviour of ‘construction’**

Figure 8 visualises the *connections* between the representatives in the FSSPP network with regard to the socio-cognitive behaviour of construction. The Bernoulli/Erdős-Rényi model reports an AIC value of 171.4, a parameter estimate equal to -0.6614, with a standard error of 0.1863, and a p-value of 0.000538. The goodness of fit plots are presented in figure 9.



**Figure 8: Emergent interaction patterns regarding the socio-cognitive behaviour of construction.**

On the basis of the significant result we can interpret that all edges in the network are equiprobable; which means that each tie has an equal mathematical or logical probability to be formed. Yet, this simplistic model does not fully capture the larger statistics of the original network compared in the goodness of fit plots (especially, in the goodness of fit plots of in-degree, out-degree, and edge-wise shared partners). The goodness of fit models of the reduced homogeneous realization-dependent model (figure 10), the nodal covariate effects model (figure 11), and the dyadic covariate effects model (figure 12), visually all show an improvement in model fit.

This improvement is also reflected in the AIC values of the models (table 9). The parameter estimates, standard errors and p-values of these three models are presented in table 10. In some of these models, certain (hypothesized) parameters are not included (e.g. trust, actor importance, etc.). The reason for this is that models including these statistics did not converge or degenerated. It turns out that only a few of our hypotheses are significant. In the dyadic

covariate model even only the trust parameter has a value of lower than  $p=0.05$ . The GOF statistics of this model indicate that there is still room of improvement regarding the comparison of the model to the higher order network statistic of in-degree.

Table 9: AIC values of the construction models.

Model:	AIC value:	Terms included:
Bernoulli/Erdős-Rényi model	171.4	Edges
Reduced homogeneous realization-dependent model	169.2	Edges, mutual, and gwodegree ( $\alpha=0.7$ )
Nodal covariate effects model	163.2	Edges, mutual, gwodegree ( $\alpha=0.7$ ), ttriple, years representative, top-priority Minister, type of organization, personal meaningfulness, and chairman.
Dyadic covariate effects model	156.8	Edges, mutual, gwodegree ( $\alpha=0.7$ ), ttriple, belief homophily, trust, years representative, and chairman.
Optimized dyadic covariate effects model	142.9	Edges, mutual, gwodegree ( $\alpha=0.7$ ), ttriple, in-degree popularity, belief homophily, trust, years representative, and chairman.

This room for improvement is, especially, visible in the higher values of the in-degree parameter. Therefore, we decided to control for these higher values, and therewith optimize our model to better capture the emergent interaction patterns in the FSSPP network regarding the socio-cognitive behaviour of *construction*, by including the endogenous network statistic of in-degree popularity<sup>19</sup> in the analysis (see figure 13 for GOF figures of this model). As such, the optimized dyadic covariate model is the model that is presented in the main text of the article as the model that best captures the interactive dynamics in the FSSPP network regarding the socio-cognitive behaviour of ‘construction’ between the network members.

<sup>19</sup> In-degree popularity is an endogenous network statistic which assumes that nodes with a higher in-degree are more attractive for others to send a tie to. In our analysis, this would imply that representatives that *receive* a lot of learning ties from network *alters*, are more attractive for other network *alters* to also send a learning tie to.

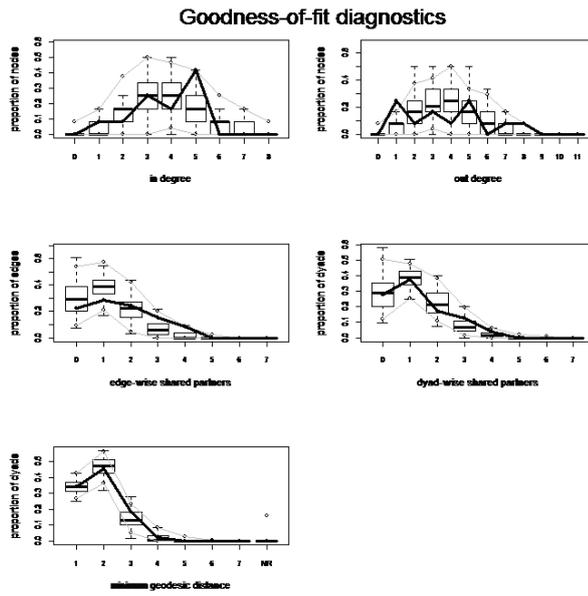


Figure 9: GOF figures Bernoulli/Erdős-Rényi model.

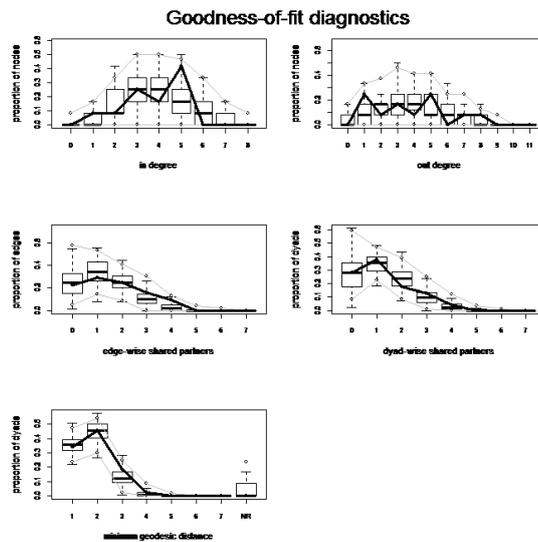


Figure 10: GOF figures reduced homogeneous realization-dependent model.

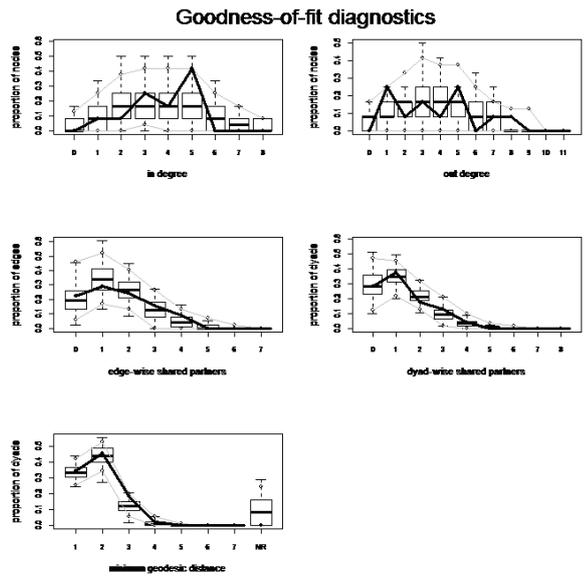


Figure 11: GOF figures nodal covariate effects model.

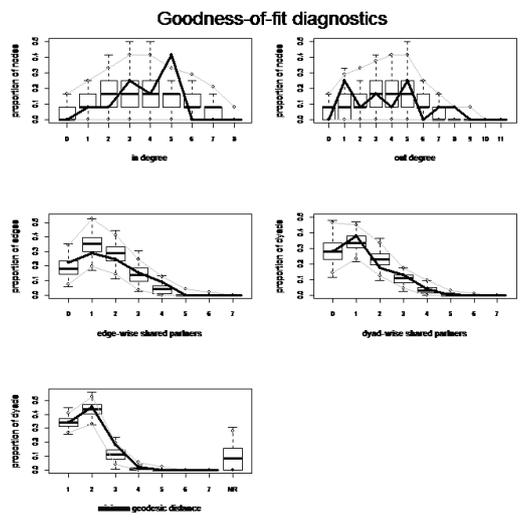


Figure 12: GOF figures dyadic covariate effects model.

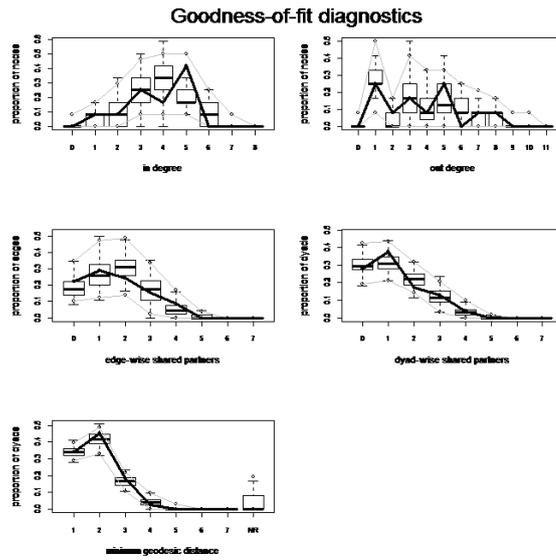


Figure 13: GOF figures model optimized dyadic covariate effects model.

**Table 10: Parameter estimates, standard errors and p-values of the analyses on the dimension of construction.**

	Reduced homogeneous realization-dependent model			Nodal covariate effects model			Dyadic covariate effects model			Optimized dyadic covariate effects model		
	$\theta$	(se)	P value	$\theta$	(se)	P value	$\theta$	(se)	P value	$\theta$	(se)	P value
<b>ENDOGENEOUS FACTORS</b>												
Edges	-0.6251	0.5112	0.2237	-4.73204	1.96303	0.0174*	-2.11183	0.93388	0.0255*	4.5828	3.0964	0.14144
Mutual	1.5829	0.5541	0.0050**	1.07870	0.60715	0.0781	1.13785	0.60848	0.0639	1.2951	0.6437	0.04643*
Gwodgegree( $\alpha=0.7$ )	1.3791	0.5866	0.0203*	0.74449	7.19201	0.9177	1.246917	2.16716	0.6438	-0.3864	0.2247	0.08804
Ttriple	-	-	-	-0.03624	0.12125	0.7655	-0.03223	0.11824	0.7856	0.1517	0.1201	0.20923
In-degree popularity	-	-	-	-	-	-	-	-	-	-2.6987	1.0632	0.01239*
<b>NODAL COVARIATES</b>												
Years representative				0.29757	0.13127	0.0252*	0.15326	0.10640	0.1523	0.1796	0.1144	0.11912
Personal meaningfulness				0.10124	0.09014	0.2636	-	-	-	-	-	-
Top-priority Minister				0.07000	0.07563	0.3565	-	-	-	-	-	-
Chairman				-2.20979	1.01691	0.0317*	-1.64316	0.90713	0.0725	-4.5929	2.0884	0.02974*
Agency or department				-0.07520	0.34757	0.8291	-	-	-	-	-	-
<b>DYADIC COVARIATES</b>												
Belief homophily							0.15371	0.48145	0.7501	0.1393	0.5012	0.78156
Trust							1.10846	0.49161	0.0259*	1.5158	0.5681	0.00867**
Actor importance							-	-	-	-	-	-
<i>Goodness of fit</i>	LL=-80.59095, df=4 AIC=169.2, BIC=180.7			LL=-71.61463, df=11 AIC=163.2, BIC=192.1			LL= -69.40338, df=9 AIC=156.8, BIC=182.8			LL=-61.43734, df=10 AIC=142.9 BIC=171.7		

## Factors influencing the socio-cognitive behaviour of ‘co-construction’

Figure 14 visualises the *tie-formations* between the representatives, in terms of elaborating on the other’s information and ideas, in the FSSPP network. In order to test whether our hypotheses explain for the emergent interaction patterns within the FSSPP network of this socio-cognitive behaviour, we started again with a Bernoulli/Erdős-Rényi model. The AIC for this model is listed in table 11; the parameter estimate of the model equals -1.0549, with a standard error of 0.2013, and a highly significant p-value. The significant result implies that all edges are equiprobable.

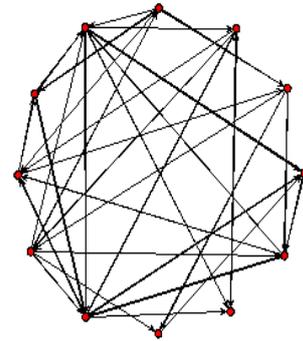


Figure 14: Emergent interaction patterns regarding the socio-cognitive behaviour of co-construction.

The goodness of fit plots are presented in figure 15; the model does capture the higher order network statistics very well. There is only some misfit in the *out-degree* model around the value of 2. This can be explained by the fact that only 1 representative in the FSSPP network has an out-degree value equal to the value of 2 regarding the socio-cognitive behaviour of co-construction. This is different from the expected value – nonetheless the Bernoulli/Erdős-Rényi model still falls within the given bandwidth compared to the higher-order network statistic of out-degree.

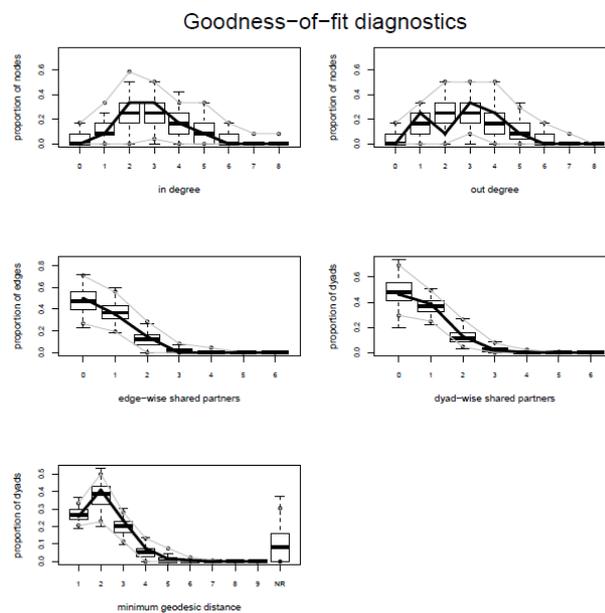


Figure 15: GOF figures Bernoulli/Erdős-Rényi model.

We do, however, notice in the subsequent analyses that *all* models with the parameter of out-degree degenerate or do not converge to finite parameters. Hence, the parameter of out-degree is not included in the reduced homogeneous realization-dependent model, the nodal covariate effects model, and the dyadic covariate effects model. The AIC values of these models can be retrieved from table 11, while the parameter estimates of the models, standard errors and p-values are presented in table 12.

<b>Model:</b>	<b>AIC value:</b>	<b>Terms included:</b>
Bernoulli/Erdős-Rényi model	152.6	Edges
Reduced homogeneous realization-dependent model	153.9	Edges, mutual, and ttriple
Nodal covariate effects model	150.8	Edges, mutual, ttriple, years representative, top-priority Minister, type of organization, personal meaningfulness, and chairman.
Dyadic covariate effects model	154.7	Edges, mutual, ttriple, years representative, top-priority Minister, type of organization, personal meaningfulness, chairman, trust, actor importance, and belief homophily.

**Table 11: AIC values of the co-construction models.**

From the goodness of fit models it can be observed that the reduced homogeneous realization-dependent model (figure 16) and the dyadic covariate effects modal (figure 18) *are* both a worse fit compared to the initial Bernoulli/Erdős-Rényi model. The nodal covariate effects model turns out to be the best model in explaining *tie-formation* of the socio-cognitive behaviour of co-construction in the FSSPP network (figure 17). This can also be seen in the low AIC value of the model (table 11). Therefore, the nodal covariate effects model is presented in the main text of the article as best fitting model for the socio-cognitive behaviour of ‘co-construction’.

Goodness-of-fit diagnostics

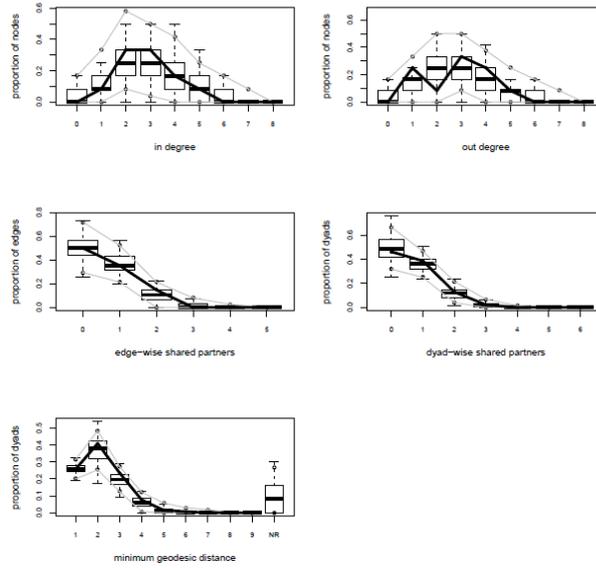


Figure 16: GOF figures reduced homogeneous realization-dependent model.

Goodness-of-fit diagnostics

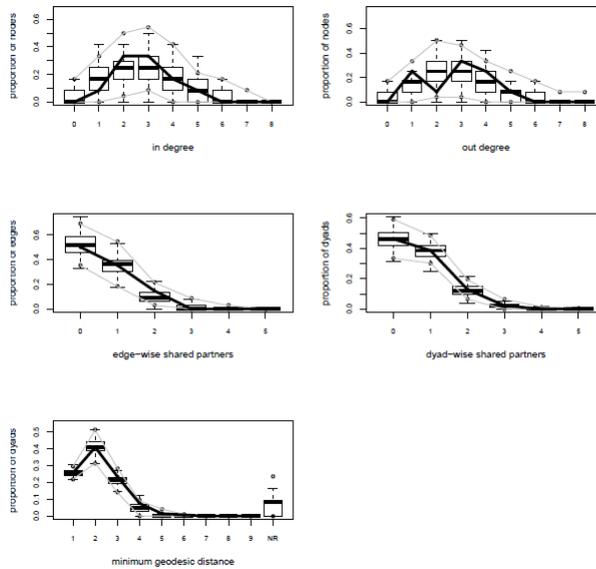


Figure 17: GOF figures nodal covariate effects model.

### Goodness-of-fit diagnostics

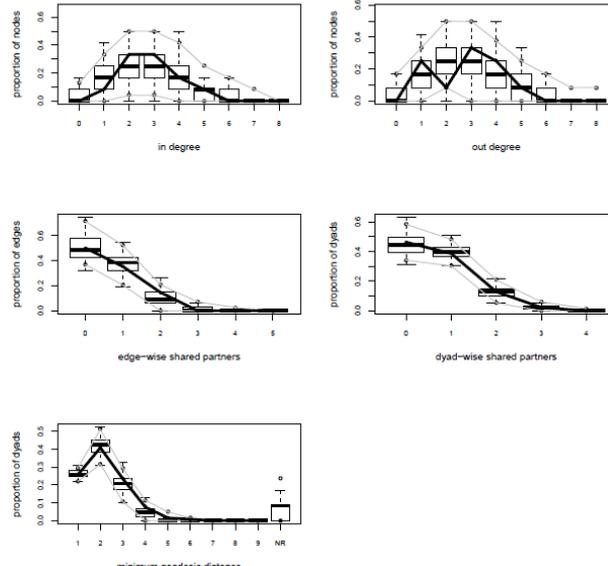


Figure 18: GOF figures dyadic covariate effects model.

**Table 12: Parameter estimates, standard errors and p-values of analyses on the dimension of co-construction.**

	Reduced homogeneous realization-dependent model			Nodal covariate effects model			Dyadic covariate effects model		
	$\theta$	(se)	P value	$\theta$	(se)	P value	$\theta$	(se)	P value
<b>ENDOGENEOUS FACTORS</b>									
Edges	-0.75181	0.54124	0.451	-7.64346	2.39793	0.00119*	-7.75660	2.45861	0.00203**
Mutual	-1.21115	0.80291	0.134	-1.93497	0.90238	0.03396*	-1.99114	0.88495	0.02626*
Gwodgee( $\alpha=0.7$ )	-	-	-	-	-	-	-	-	-
Ttriple	-0.03058	0.24138	0.899	-0.39381	0.28574	0.17062	-0.39423	0.29389	0.18230
<b>NODAL COVARIATES</b>									
Years representative in network				0.46670	0.18594	0.01336*	0.46667	0.19160	0.01632*
Personal meaningfulness				0.34327	0.15296	0.02659*	0.32272	0.15622	0.04098*
Top-priority Minister				0.06834	0.11448	0.55162	0.09276	0.11567	0.42414
Chairman				-0.82605	0.90887	0.36518	-0.83643	0.92121	0.36570
Agency or department				-0.67407	0.55771	0.22909	-0.72134	0.55541	0.19650
<b>DYADIC COVARIATES</b>									
Belief homophily							-0.53928	0.53588	0.31625
Trust							0.04556	0.53687	0.93250
Actor importance							0.45860	0.45096	0.31121
<i>Goodness of fit</i>	LL = -73.96954, df=3 AIC=153.9, BIC= 162.6			LL=-67.38364, df=8 AIC=150.8, BIC=173.8			LL=-66.36561, df=11 AIC=154.7 , BIC=186.4		

### Factors influencing the socio-cognitive behaviour of ‘constructive conflict’

The final analyses focus on the interactions between the representatives in the FSSPP network regarding the socio-cognitive behaviour of ‘constructive conflict’ (figure 19). The interviewees were asked to indicate which of the other representatives in the network were most open in sharing new information and ideas with them. For the Bernoulli/Erdős-Rényi model the parameter estimate, standard error and p-value are presented in table 13, and the goodness of fit plots can be retrieved from figure 20. The model has an AIC value of 162.2 (see table 13). The parameter of edges proves to be a significant predictor, which means that all edges in the network are equiprobable. This simplistic model seems to be a reasonable fit if we look at the GOF figures. Though, there is room for improvement of our explanatory model with regard to the comparison to the higher-order network statistics of in-degree and out-degree.

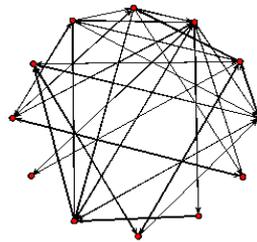
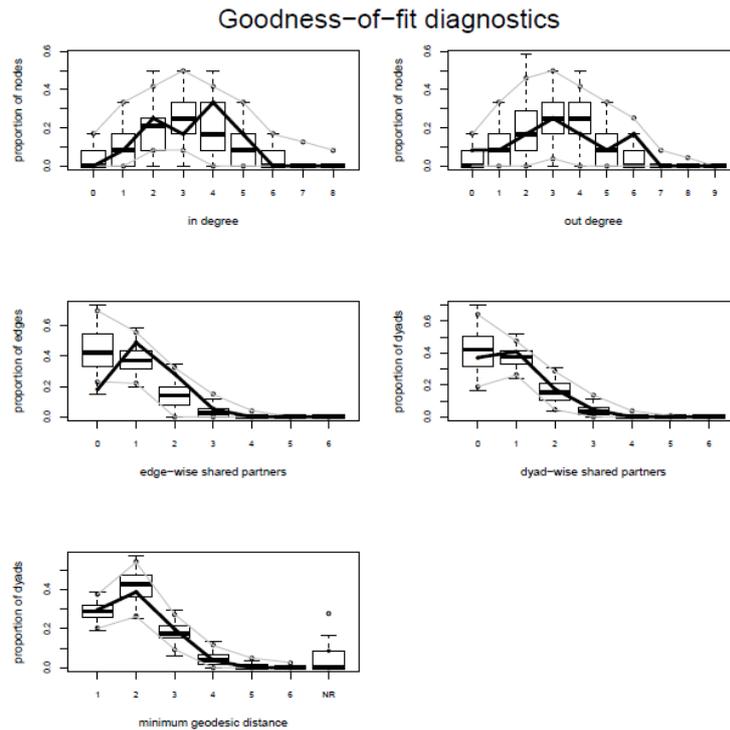


Figure 19: Emergent interaction patterns regarding the socio-cognitive behaviour of constructive conflict.

Model:	AIC value:	Terms included:
Bernoulli/Erdős-Rényi model	162.2	Edges
Reduced homogeneous realization-dependent model	157.5	Edges, mutual, and gwodegree ( $\alpha=0.7$ )
Nodal covariate effects model	157.0	Edges, mutual, gwodegree ( $\alpha=0.7$ ), years representative, top-priority Minister, type of organization, personal meaningfulness, and chairman.
Dyadic covariate effects model	145.0	Edges, mutual, gwodegree ( $\alpha=0.7$ ), belief homophily, trust, actor importance, years representative, and chairman.

Table 13: AIC values of the constructive conflict models.

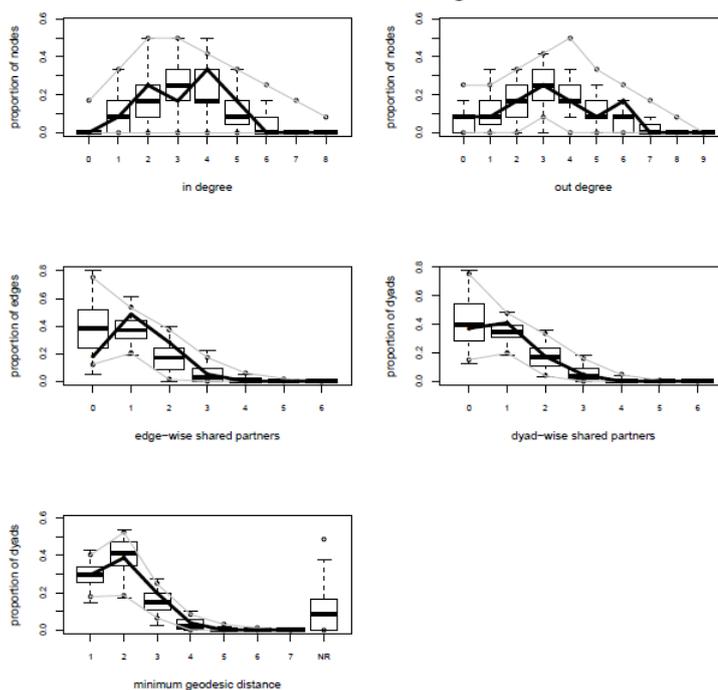


**Figure 20: GOF figures Bernoulli/Erdős-Rényi model.**

The goodness of fit models of the homogeneous realization-dependent model (figure 21), the nodal covariate effect model (figure 22), and the dyadic covariate effects model (figure 23), each show an improvement in model fit. These improvements are also visible in the AIC values of the models (table 13 ). In table 14 the parameter estimates, standard errors and p-values of these models are presented.

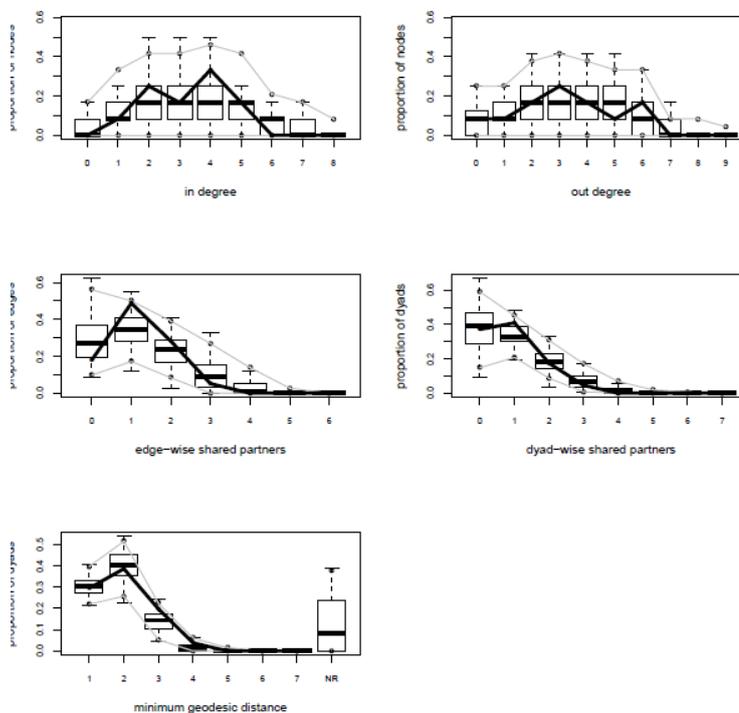
Models including the term of ttriple parameter did not run to finite parameters or degenerated; therefore, this variable is not included in the models. Furthermore, we deleted the *non-significant* nodal covariate effects from the dyadic covariate effects model to ensure a satisfactory improvement of the latter model. Hence, the dyadic covariate effects model is in the main text of the article presented as the best model for capturing the interactive dynamics regarding the socio-cognitive behaviour of ‘constructive conflict’.

### Goodness-of-fit diagnostics



**Figure 21: GOF figures reduced homogeneous realization-dependent model.**

### Goodness-of-fit diagnostics



**Figure 22: GOF figures nodal covariate effects model.**

### Goodness-of-fit diagnostics

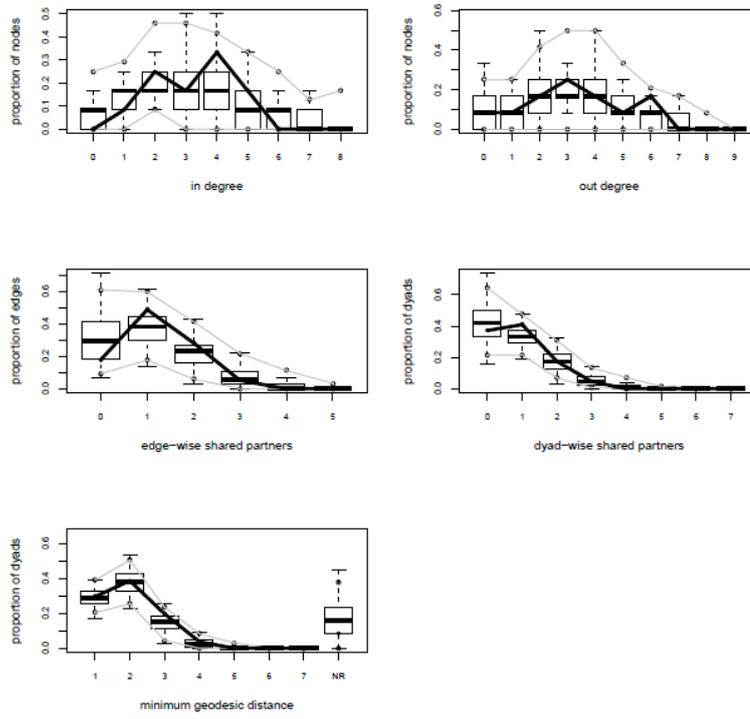


Figure 23: GOF figures dyadic covariate effects model.

**Table 14: Parameter estimates, standard errors and p-values of the analyses of the dimension of constructive conflict.**

	Bernoulli/Erdős-Rényi model			Reduced homogeneous realization-dependent model			Nodal covariate effects model			Dyadic covariate effects model		
	$\theta$	(se)	P value	$\theta$	(se)	P value	$\theta$	(se)	P value	$\theta$	(se)	P value
<b>ENDOGENEOUS FACTORS</b>												
Edges	-0.8660	0.1901	<1e-04***	-1.3637	0.3639	0.00027***	-2.93622	1.39527	0.0374*	-3.60812	0.86353	<1e-04 ***
Mutual				1.7537	0.5985	0.00401 **	1.42707	0.62383	0.0239*	1.39863	0.62276	0.0265*
Gwodgegree( $\alpha=0.7$ )				0.1829	0.9144	0.84177	-0.20325	0.99482	0.8384	-0.04548	0.78312	0.9538
Ttriple				-	-	-	-	-	-	-	-	-
<b>NODAL COVARIATES</b>												
Years representative in network							0.25441	0.11388	0.0273*	0.19129	0.10815	0.0794
Personal meaningfulness							0.06675	0.08276	0.4215	-	-	-
Top-priority Minister							-0.07780	0.06938	0.2643	-	-	-
Chairman							-1.21484	0.63641	0.0586	-0.70345	0.60796	0.2495
Agency or department							0.13337	0.31548	0.6732	-	-	-
<b>DYADIC COVARIATES</b>												
Belief homophily										1.29691	0.50046	0.0107*
Trust										0.19043	0.49341	0.7002
Actor importance										0.89136	0.44464	0.0472*
<i>Goodness of fit</i>	LL=-80.11857, df=1 AIC=162.2, BIC=165.1			LL= -74.73451, df=4 AIC= 157.5, BIC=169			LL=-69.47521, df=9 AIC=157, BIC=182.9			LL=-63.48185, df=9 AIC=145, BIC=170.9		

## Chapter 5

# Managing Collaborative Innovation Networks – Practical Lessons from a Belgian Spatial Planning Initiative

Written by Vidar Stevens and prof. dr. Annika Agger

### ABSTRACT

Collaborative innovation networks are increasingly used as vehicles for fostering innovative policy solutions. However, scholars have noted that the extent to which collaborative networks can actually contribute to the development of innovative policy solutions depends on how they are managed. Empirical research on the management of collaborative policy innovation processes is, however, scarce. Therefore, we review in this article a case to add new insights to the causal link between collaboration, management, and innovation. Specifically, we examine the management strategies which helped a Flemish administrative network to develop a radical new Spatial Planning Policy Plan. This study shows that the best way to manage collaborative innovation networks is not to press directly for results, but take the time to invest in relationship-building and together agree on a planning and clear process steps. Such a management approach allows actors to get to know each other and from thereon expand, with more background and appreciation for the others' goals, behaviours, and intentions, their group activities concerning the formulation of a radical and innovative policy plan.

**Key words:** collaboration, innovation, management, governance, spatial planning.

**Reference:** Stevens, V. & Agger, A. (2017). Managing Collaborative Innovation Networks – Practical Lessons from a Belgian Spatial Planning initiative. *Journal of Public Administration and Governance*, 7(3), 154-173.

## Introduction

This article discusses how and if managers can facilitate collaborative processes of innovation. We understand management in this study as, “the endeavours and interventions of a central actor (‘the manager’) to facilitate collaborative networks, by shaping the conditions under which these networks operate and the involved stakeholders interact with each other” (Voets, Verhoest and Molenveld, 2015: 983). Innovation, and more in particular ‘policy innovation’, is interpreted as, “creative search processes used to develop and realize new ideas and solutions that radically transform the way in which we are imagining and doing things in the public sector” (Ansell and Torfing, 2014: 4). We specifically analyse the management of the collaborative process to develop a radically innovative Flemish Spatial Planning Policy Plan (FSSPP) in de Belgian NUTS 1 region of Flanders. In this case, government officials moved from the assumption that more concerted and innovative policy solutions will emerge for spatial planning problems, as more departmental organizations and thus more knowledge, resources, and experiences are included in the decision-making processes.

The focus on the management of collaborative processes to spur innovation in the public sector is very timely. In recent years, many Western governments have established collaborative arrangements, just like the Flemish government has done, to search for policy solutions that move beyond conventional wisdom and failed practices, and which are capable of getting a hold on the cross-cutting nature of many wicked policy issues, like immigration, global warming or coastal protection (OECD, 2014). In similar vein, scholars have in recent years also gained more interests in studying the causal link between collaboration and innovation in the public sector (e.g. Torfing, 2017; Stevens and Verhoest, 2016a; Sørensen and Torfing, 2012; Sørensen and Torfing, 2011).

An often-heard finding in many of these scholarly works is that despite the highflying expectations in the innovative capacities of collaborative networks, the extent to which collaborations can actually contribute to the development of innovative policy solutions for cross-cutting policy problems depends on the way in which they are managed (Montin, Johansson and Forsemalm, 2014). Participants of collaborations can, for example, hold different problem perceptions, may be reluctant to collaborate, or may paralyze the decision-making process for strategic reasons. Hence, management is necessary to get participants of collaborations moving in the same direction.

So far, the management strategies for exercising indirect control over collaborative processes have already been the subject of considerable research, most notably in the network management and governance literature (e.g. Huxham and Vangen, 2005; Milward and Provan, 2006; Agranoff, 2006; Koppenjan and Klijn, 2004). Most of these studies focused on the management of a specific scenario of interdependency-driven network engagement; that is, the development of more or less the same kind of goods, services or policy solutions but then in an integrated manner.

Innovation, however, entails a clear break from the past, and thereby the radical transformation of existing and failed policy practices, ideas, and solutions (Sørensen and Torfing, 2010). Or as Stevens and Verhoest (2016a: 19) state, “within collaborative innovation processes, participants do upfront barely know what to expect; the only certainty they have

is that the to be developed policy innovations (i.e. the innovative policy solutions) are meant to act a game-changers and radically alter the way in which a policy problem is addressed.”

For that reason, scholars have argued that the management of collaborative innovation processes is very different from the management of ordinary collaborations, as managers must not only steer for integrated results and compromises, but also foster creativity and out-of-the-box thinking among participants to develop radical new (not yet existing) policy paradigms, and manage the ‘unknowns’ (i.e. a not yet identifiable radical policy change in a specific context) that surround processes of innovation in the public sector (Bason, 2016).

Empirical research on the management of collaborative processes of innovation in the public sector has, however, remained scarce (Ansell and Torfing, 2014: 238). This lack of research is striking because it means that we (i.e. ‘the scientific community’) do not fully understand how practitioners, in their role as managers, can live up to their potential in collaborative processes of innovation which take place in the public sector. In addition, it implies that we do not have a realistic sense of the value of collaborative networks as vehicles for the promotion of innovative policy solutions. Hence, the aim of this article is to get a more fine-grained understanding of what strategies and approaches managers apply at the micro-level in collaborative processes to spur innovation, and how network members experience these interventions and react thereupon. In this way, we can get a better grasp on the managerial drivers and barriers in such collaborative innovation arrangements.

For our data collection and analysis, we conducted interviews and a document analysis. The empirical data thus includes: relevant documents (e.g. meetings minutes, meeting agendas, parliamentary decrees, policy documents and position papers), and twelve transcribed interviews. Overall, this study shows that the management of collaborative innovation process is a complicated, slippery and sometimes even a plain unworkable exercise. When the manager is further confronted with a time pressure, the best way to manage these collaborative arrangements is not to press directly for results, but take the time to invest in relationship-building and together agree on a planning and clear process steps. Such a management approach allows actors to get to know each other and from thereon expand, with more background and appreciation for the others’ goals, behaviours and intentions, their group activities concerning the creation of a radical and innovative policy change.

We continue as follows. The next section discusses more in-depth what we currently know about the management of collaborative processes of innovation in the public sector. Section 3 presents the case. Section 4 elaborates on our data and chosen methodology. Section 5 reports the case results, and section 6 – the final section – will reflect on the main findings of this study and put them in a broader perspective.

## **The art of managing collaborative innovation processes – theoretical perspectives**

In recent years, we have seen a gradual rise in the number of papers that focus on the management of innovation processes in collaborative networks (Ansell and Gash, 2008). In many of these studies, scholars have argued that managers of these collaborative innovation processes do not ‘command’ in the same way as they might do in hierarchical organizations.

The reason for this is that collaboration is typically voluntarily. In addition, as Bryson, Crosby and Middleton Stone (2006) have indicated, collaboration operates in a 'shared power' world in which different stakeholders control specific resources and have their own distinct bases of power and authority. Hence, Ansell and Gash (2012: 5) argue that the key adjective that can be used to describe the management of public sector innovation processes in collaborative networks is 'facilitative', i.e. managers may bear responsibility for steering collaborations toward efficient service delivery, consensus or creative problem solving, but they must work within the constraints imposed by voluntary action and shared power.

In specifying different management styles and strategies, scholars have mainly taken a contingency approach for explaining the behaviours of managers in collaborative networks. The contingency approach assumes that there is no single best way to exercise the management of collaborative networks; because, different tasks, goals, and contexts, place distinctive kinds of demands on managers (Agger and Sørensen, 2016). In some collaborations, for example, the primary challenge of the manager may be to cultivate sufficient trust among the stakeholders in the collaborative network. In other situations, the core task of the manager can be to help an already functioning collaboration of stakeholders to be more creative or innovative.

Research on the collaborative processes of innovation and its management is, however, still in its infancy (Ansell and Torfing, 2014: 238-239). Only a few scholars have offered accounts of possible strategies managers can use to ensure the development of policy innovations or innovative public services in collaborative innovation networks (see, for example, Bason, 2014; Stevens and Verhoest, 2016a, Agger and Sørensen, 2016, Keast and Waterhouse, 2014).

Some of the findings and suggestions of these earlier studies are also quite contradictory to each other. A good example is a finding of Bason (2014: 220) in comparison to an outcome of the study of Keast and Waterhouse (2014: 166). According to Bason, distortive management strategies (e.g. putting or even forcing organizations beyond their usual comfort zone) act as catalysts for creativity and innovation in collaborative networks. Keast and Waterhouse, on the other hand, argue that integrative strategies, which are about encouraging and stimulating the genuine sharing of information among actors without any form of coercion, are most beneficial to spur idea generation in processes of policy innovation.

Nevertheless, the few conducted studies have increased our knowledge about the interactive dynamics and the management of processes of innovation in collaborative networks. The studies in the book of Ansell and Torfing (2014), for example, provided us with more information about generative mechanisms between collaboration and innovation, and how these generative mechanisms can be fostered by a public leader or manager. In addition, we have gotten more knowledge about the determinants that hinder or stimulate learning among stakeholders at the micro-level in collaborative innovation networks and how a manager can spur learning among actors (Stevens, 2018).

Lastly, different taxonomies of management roles and tasks regarding the facilitation of collaborative innovation processes have been developed on the basis of single case studies. Agger and Sørensen (2016: 5), for example, developed a taxonomy of management roles and tasks managers can perform to bring about 'collaborative advantage' for involved partners.

More specifically, they argue that a manager of a collaborative innovation process must act as *pilot*, to give direction to the collaboration and keeping it on track, as *whip* to ensure that network members are not reluctant to participate in a collaborative manner in the innovation process, as *culture-maker* to normalize creativity and innovative behaviour in the arrangement, and as *communicator* to spur dialogue in the collaborative arrangement and connect network partners. Other taxonomies are: the network management triangle (Stevens and Verhoest, 2016a), the Innovative-Leadership Model of Termeer and Nootboom (2014), the four public design attitudes of Bason (2014), and the Model of Facilitative Leadership of Ansell and Gash (2012).

There are, however, still many empirical puzzles that need to be solved (see Ansell and Torfing, 2014: 238-239), and variously accepted truisms which have to be empirically scrutinized (Stevens and Verhoest, 2016b). For example, is it always the case that collaboration ensures that public innovation draws upon and brings into play all relevant innovation assets in terms of knowledge, imagination, creativity, courage, resources, transformative capacities and political authority (Sørensen and Torfing, 2012: 5)? Moreover, are there different ways of collaboration that can stimulate and strengthen different aspects of the innovation process? And if so, what management is needed to support different forms of collaboration? Hence, we review a new case as a means to validate existing insights, and possibly increase our knowledge, about the causal link between collaboration, management, and innovation.

## **The Flemish collaborative process to develop an innovative spatial planning policy**

In this article, we focus on a Flemish administrative network consisting of twelve representatives from departmental organizations. The departmental organizations belonged to twelve different policy sectors<sup>20</sup>, as a means to capture the intertwined nature of spatial planning policies. The collaborative innovation network can be regarded as a top-down mandated administrative network, which political leaders permitted to develop a radical new policy strategy to better tackle problem issues within the field of spatial planning, like accessibility of infrastructure, cultural heritage preservation, social and economic cohesion, sustainable development, etc.

The administrative network was established in 2011 – but for this study we focus in on an ‘innovation episode’ between December, 2015 and February, 2016. During this innovation episode the administrative network members deliberately tried to develop a new Flemish Sustainable Spatial Planning Policy (FSSPP). The aim was not to generate more or less of the same kind of policy solutions, but rather to change the form, content and repertoire of policy actions, and even transform the underlying problem understandings, objectives, and program theory of the conventional governmental strategies (i.e. a radical transformation). This aim aligns with what Sørensen and Torfing (2011) regard as an innovative policy change. For that reason, we perceive the aim of this process in the administrative network as a collaborative policy innovation process.

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<sup>20</sup> The policy sectors in the administrative network were: education, welfare, enterprise, heritage, horizontal department of general affairs, mobility, spatial planning, economic affairs, ecology, employment, social affairs, and housing.

We believe that the case can be perceived as a most-likely case for collaborative processes to produce innovative policy outcomes, because many important enablers for collaborative innovation were present in the case, like: the support from the Flemish Minister President for the innovation process, the will of the involved departmental organizations to develop a creative and out-of-the-box policy plan, the freedom for the representatives in the administrative network to experiment with new policy ideas, and the involvement of organizational representatives who devoted more than fifty percent of their working time to the spatial planning project.

To this end, we expect that by examining the interplay between the behaviours of the network members and the strategies the manager of this Flemish administrative network utilized to spur collaboration and innovation, we learn more about what micro-level management strategies respectively enhance or slow down collaborative innovation processes, and thereby we get a better grasp on the managerial drivers and barriers in such collaborative innovation arrangements.

### **The methods to study the management practices**

We used a case study methodology to study the management strategies of the manager of the administrative FSSPP network. We acknowledge the inherent limitations of using single case studies for extrapolating findings, as was described by George and Bennett (2005). Yet, we also agree with Flyvbjerg (2011: 305) when he argues that a case study can further scientific development by the force of example. To this end, we do not pretend that our findings are fully generalizable or highly theoretical. However, we are convinced that our reflections are helpful in substantiating the development of theory on the impact of management on the innovative capacity of collaborative networks.

For the data collection, we drew on a detailed process mapping based on an analysis of documents and a series of interviews. The document analysis included: minutes of the meetings, position papers and policy documents of the representatives' organizations, (draft) versions of the final policy document, agendas of the meetings, and parliamentary decrees. The relevance of the documents was determined by making a selection based on whether the information in the documents said something new or extra about the different stagnations and breakthroughs of the policy innovation process, the various activities of the manager, and the positions of the actors with regard to the problem situation and possible solutions. The document analysis was complete once we reached data saturation.

Subsequently, the interviews helped us gain more insight into the behaviours, ideas, attitudes, and experiences of the members of the network with regard to the development of the collaborative innovation process, the interventions of the manager, and the process results. The interviews were semi-structured and the questions concentrated on the key events and insights that followed from the document analysis. In total, we interviewed all twelve representatives in the network (including the manager).

The interviews typically lasted an average of 1.5 hours. Each interview was recorded and transcribed. We guaranteed our respondents anonymity. Therefore, we numbered the interviews and used the phrase 'respondent (number)' to report quotes from the interviews

in this article. We triangulated our interview data by comparing the interview responses to each other and to the document analysis findings. We followed-up with respondents if we ran into inconsistencies to ask for clarification.

For the coding of both the document- and interview data, we used the NVivo software program. In this coding process, we made use of the earlier-discussed *management roles* (i.e. pilot, whip, culture-maker, and communicator) from Agger and Sørensen's taxonomy (2016) as grounding concepts to code the documents and the interview transcripts. As such, this taxonomy allowed us to gain a notion of if the FSSPP network manager performed all different management roles during the collaborative policy innovation process and if so, which specific management strategies he utilized to perform these roles and for what reasons.

Subsequently, we coded the empirical data in such a way that we were able to distill how the different network members experienced and responded to these management strategies. Hence, in the results section we present how the manager of the administrative FSSPP network intervened in the collaborative innovation process, and how the network members experienced these managerial interventions and reacted thereupon.

## **The management interventions in the administrative FSSPP network**

We start by presenting the results of the management activities of the manager as 'pilot'. As pilot a manager must give the overall direction to the collaborative innovation process (Agger and Sørensen, 2016: 5). In the next few paragraphs, we thus describe what strategies the manager utilized, for what purposes, and with what effect, to keep the collaborative process on track.

### **Pilot**

From the empirical data, it became clear that the role of the pilot was exercised by the manager. In giving direction to the collaboration and keeping it on track, the manager had to cope with two big challenges. First of all, the manager had to design the process in such a way that it was open and participatory. Secondly, because the political level expected a shared policy plan from the network members within two months', the manager had to make sure that the collaborative process did not take too long or become too messy (respondent 12).

To balance these challenges, the manager used a very 'controlling' management style (respondent 4). This controlling management style immediately started in the first meeting. After the standard introductions, the manager opened the discussion with what the final product should look like, what process steps would be followed, and what the schedule for the next weeks was. Furthermore, he demanded that all representatives cleared their agendas and devoted at least fifty percent of their time in the upcoming two months to the administrative collaboration. The manager argued that this amount of time was required for the individual representatives to read all their network peers proposals, to expand their knowledge about different types of spatial planning issues, and to organize a proper feedback loop with their home-organizations.

Respondents 8 and 10 argued that most representatives supported and understood the need for these controlling, or what they described as 'business-like', piloting interventions of the

manager. Respondent 8, for example, explained: “at the start it was necessary to create a stable foundation from which we could work, otherwise it would have been difficult to make much progress in such a short period of time.”

However, there were also several points of critique by the network members. Respondents 3, 4 and 6 all indicated that the high workload and short time planning of the project were very demanding; they felt they could not simply dedicate fifty per cent of their time to this spatial planning project, because they also had other work obligations. Consequently, especially respondent 4 constantly had the feeling that she was overtaken by events during the collaborative process. She had too little time to prepare for meetings, and she was unable to keep her home-organization’s Minister and civil servants up-to-date on developments in the administrative network.

Other points of critique included the way in which the manager decided on what would be discussed in the general meetings and when. During the first meeting, the network members agreed that a shared agreement had to be reached within five meetings. Therefore, the manager urged the network members to ensure that they had their plans and proposals ready by the next session. The network members were only allowed to introduce a maximum of three policy proposals in the discussions. With this first ‘selection mechanism’, the discussions in the administrative network would remain containable, as it implied that only thirty-six policy proposals would be discussed in the collaborative arrangement.

Furthermore, to keep the final document readable and allow for a bigger impact on political discussion, the manager insisted that the final document would only include 10 to 15 policy proposals. So, another selection would occur in the course of the general meetings. Lastly, the manager unilaterally decided that each proposal would be discussed in the general meetings. However, if there was no general agreement on a proposal, or it did not appear that a shared agreement would be reached for that proposal in the next meeting, dialogue on that proposal would not continue.

These unilateral decisions of the manager about how proposals were to be selected and discussed frustrated many network partners. Respondent 6, for example, said that many representatives wondered whether the decision to institutionalize the ‘selection mechanisms’ was a legitimate act by the manager. In their opinion, this was the responsibility of the network members, who represented a certain organizational constituency, and not the call of the manager to make. Hence, to appease tempers the manager agreed with the organizational representatives, and in addition to the ten to fifteen main policy proposals, a thirty one-page appendix with the minority opinions and policy proposals would also be drafted.

This appendix helped the representatives show their Minister and senior administrative leaders that they “fought for their organizational interests” (respondent 2). Because, if a Minister or senior administrative leader merely saw the ten to fifteen main policy proposals, he or she would not get a full overview of the other discussions that took place in the collaborative arrangement (respondent 9).

Moreover, the way the manager organized the discussions and designed the decision-making process changed the way several network members behaved in the collaborative

arrangement. For example, before the second meeting, the network members were asked to add their three policy proposals to an Excel spreadsheet. In this spreadsheet, they were also supposed to indicate whether they supported, were opposed, or had no opinion about others' proposals. Based on this initial scoring, it was decided whether or not a proposal would be discussed in the upcoming meetings. Therefore, because network members knew their proposals would be 'judged' by their peers prior to the actual discussions, they would strategically introduce proposals that would not find much opposition in the administrative network. Often, these were policy proposals that did not demand a radical policy change. Hence, respondent 2 argued, "this strategic selection of policy proposals reduced the innovative capacity of the collaborative arrangement." In addition, respondent 6 noted that many representatives 'put their foot down' during the general discussion with the hope that this rigid behaviour would increase the chance that their policy proposals would be included in the final policy document.

Looking back, the manager recognized that the process was not an easy linear process. Also, he knew that some network members felt that the innovative potential of the collaboration was not fully taken advantage of. Nevertheless, as a pilot, he was in a difficult balancing act between finding agreement and creating room for creativity and debate. Further, he had to perform this balancing act under time constraints. Therefore, he was very proud that after just two months he was able to present a document to the political level that had the support from all representatives' organizations.

### **Whip**

Agger and Sørensen (2016) describe the *whip* as a manager who ensures network members are not reluctant to participate in a collaborative manner in the innovation process. We have already noted that the manager was confronted with network members that showed rigid forms of behaviour. Another challenge the manager had to deal with, as the whip, was the many 'new voices' around the table (respondent 4). New voices were network members who, up and until the case we are studying, had not been a member of the administrative FSSPP network. In contrast, the 'older network members' joined the administrative network in 2011 as representatives of their organizations.

Many of these new voices were relatively shy and waited a long time to see which way the cat jumps before they committed to any agreement in the collaborative arrangement (respondent 5). One of the 'shy' new voices reported the steep learning curve she experienced in the collaborative process (respondent 3). She noted that in the beginning, she found it very difficult to engage in the talks. She soon realized that all the other representatives acted as "lions that did their utmost to protect their organizational territory." Therefore, she also started to play the game more roughly, despite the feeling that this went against her human nature. She felt this was the only way to secure her home organization's interests in the collaboration.

To accommodate the participation of the 'new voices' in the network and to compensate for the influence of the 'shouters' in the collaborative arrangement, the manager used different strategies to stimulate what he called 'collaborative' behaviour (i.e. 'free, transparent and honest talking') among the representatives in the network. The type of strategy deployed

depended on the specific behaviour an individual used in the network. The manager tried to use a unique approach for each representative.

Humour proved to be a powerful weapon to silence the 'dominant' representatives in the administrative network. By making a quip about someone's rigid behaviour or rituals, the manager tried to let these dominant representatives know, in a clear but friendly manner, that "there were also other representatives involved in the deliberations (respondent 5)." As it was not the manager's intention to offend the representatives with his funny remarks, he used this management strategy sparingly and only used it on those who appreciated this form of communication. Alternatively, the manager would take a dominant or rigid representative aside 'in the corridors' to let him or her know that he did not appreciate their behaviour in the general meetings (respondent 2).

For the 'introvert' representatives in the network, the manager had another method. In bilateral talks or conversations with a small number of other representatives, the manager tried to create 'safe-spaces' for introverts to help them feel comfortable sharing their opinions and thoughts (respondent 3). Another strategy was to directly ask the shy representatives their opinion on a specific matter during the general meetings (respondent 5).

Very occasionally, as a last resort, the manager would contact a very shy representative's senior leaders to inform them the interests of their organization were not well-represented in the interorganizational arrangement. The manager hoped that, with a little push from the home-organization, the shy representative would feel more pressure to actively engage in the discussions of the collaborative network.

According to many respondents, most of the time these management interventions, targeted at influencing representatives' behaviours, worked. Respondent 6 said, "that particularly after an intervention, she experienced as a shy person more space to make her points in the collaborative innovation network." However, after a short while, the representatives would intuitively return to their normal routines and habits (respondent 6). Hence, the manager's interventions did not appear to have a long lasting effect.

The manager, however, remarked that his primary task was not to silence people or drag information and ideas out of representatives' mouths. Ultimately, each individual was responsible for their own behaviour and representation in the administrative network. Up front, the manager had already drawn up a code of conduct for how he expected the representatives to behave in the network. Specifically, this document stated that the representatives had to act transparently and reciprocally with their peers in the collaboration. This intervention was according to the manager sufficient steering from his side, because "the collaboration was not a kindergarten."

### **Culture-maker**

In collaborative innovation networks, it is not enough for the manager to ensure that the network members behave in a collaborative manner. For a policy plan to become 'innovative', participants must use their imagination and creativity to develop solutions that go beyond conventional wisdom. Therefore, Agger and Sørensen (2016) argued that a manager must also act as a culture-maker to normalize creativity and innovative behaviour in the arrangement.

However, in our case analysis, we only found two examples of interventions where the manager celebrated experimentation and creativity in the collaborative arrangement.

In the first instance, respondents 1, 4 and 11 indicated that at the start of every meeting, the manager emphasized the benefits of not only thinking about spatial planning from their 'organizational silos'. Instead, he encouraged the representatives to consider the contributions of others in the discussions with an appreciative point of view. According to respondent 4, "the great strength of the manager was that he encouraged us to search for new connections to solve spatial problems". He believed that new insights and beliefs could only follow from 'cross-fertilizations' between organizations (respondent 5). This motivated some organizations to find new synergies. For example, after years of indecision, evolving from this collaborative process, representatives from the Department of Cultural Heritage and the Agency of Economic Affairs developed new guidelines for the role of agricultural businesses in the preservation and restoration of monumental buildings.

The second example that we found was that the manager tried to break new ground by developing a shared language between the representatives. The manager noticed that during the discussions certain words seemed normal for some representatives, while they were jargon for others. The term 'quality of space' or 'mobility nodes', for example, had different meanings for network members (respondents 3 and 6). Therefore, at the end of each meeting, the manager added new words with definitions to a glossary. This way, the representatives created a shared interpretation of specific terms. The manager believed that, if they had more time, this glossary could have served as a roadmap to further develop new concepts or paradigms that better fit and defined the intertwined nature of spatial planning policies.

However, on the whole respondents 3, 5, 6 and 9 argued that creative solutions were seldom developed or discussed in the administrative network. It often seemed that representatives were not 'yet ready or prepared' to take risks; for example, they would not propose solutions that went beyond the instructions they got from their senior administrative leaders, cabinet members or ministers (respondent 3). Respondents attributed this to the feeling that there lacked a strong sense of commitment among the network members. According to respondent 9, "we barely knew each other; we had neither an idea of what the personal opinion of somebody was, nor a clue of how a person would respond to other opinions and criticisms in the administrative network."

Hence, respondent 2 suggested that it would have been helpful if the manager had invested more time and energy into cultivating a group mentality and developing a collective sense of possibility. Respondent 4 added, "the manager could have organized meetings at sea or in forests, just to get as far away as possible from politicians, senior administrative leaders and cabinet members of the Ministers." Respondent 4 believed that off-site meetings might have fostered an atmosphere where representatives were more comfortable sharing their personal views and opinions, and discussing creative policy solutions in a less politicized manner.

### **Communicator**

The fourth and final, management role Agger and Sørensen (2016) identified was the role of *communicator*. The communicator's job is to stimulate dialogue in the collaborative

arrangement and connect network partners. The manager argues that he, in his role as communicator, was faced with a challenging interactive dynamics.

First of all, it was difficult connecting representatives who had opposing views on the origins of the spatial problems and possible solutions. Within the discussions, you could distinguish two major coalitions of representatives (respondent 12). These coalitions formed quickly based on similar ideas and solutions. The two coalitions held opposing views; they represented the basic tension of spatial planning policies *between* hard and soft interests - or as respondent 12 summarized it, "between stones and the natural use of the soil." Hence, the manager had to ensure that these two coalitions could find a middle ground which satisfied the needs of all the representatives' organizations which were a part of these coalitions.

Secondly, the manager said, "another thing you could notice in the discussions was that there were some bigger players in the collaborative network." Not bigger, in the sense, that these representatives felt more important than others, but that their peers gave their ideas more weight in the network discussions (respondent 3). In consequence, some representatives, like representative 4, often felt they were just "a little pawn in another person's or organization's game of chess." These representatives experienced a certain power imbalance in the collaborative arrangement. As such, the second challenge the manager encountered in his role as communicator was ensuring that the 'smaller' network members' ideas and concerns were also given enough attention in the discussions about the innovative policy change.

The manager used different management strategies to counter the perceived power imbalances and to cope with the basic tension between hard and soft spatial planning interests. In section 5.1 we elaborated on how the manager designed and structured the discussion- and decision-making process. The manager saw this management intervention as a *hands-off* strategy, implying that from the side-line he tried to develop decision-making structures so that certain interests would not prevail over others. Simultaneously, the manager was not afraid to use a more *hands-on* approach by joining and intervening in ongoing discussions. For example, many times the manager stopped discussions that ran aground, and he came back to them at a later point in time (respondent 6).

With regard to the first challenge, the manager did not attempt to 'break up' the coalitions of representatives. Instead, the manager was very lenient in allowing the two coalitions of representatives to have their own small group discussions during the general meetings (respondent 2). In his view, these small group discussions could lead to breakthroughs if the clusters had enough room to get together and rethink their positions (respondent 5).

According to respondent 2, it was hard to say what would have happened if the manager had not allowed them to remain in their 'coalitions'. These coalitions were, besides building support for one's ideas, formed with the purpose to improve the positions of individual representatives as well as to steer the boat (read: the discussions) to a predetermined destination (respondent 2). This group formation was simply a part of the representatives' strategy. Hence, respondent 2 believed that if the manager had forced them to reconsider their coalition-building strategy they presumably would have abandoned the deliberations.

However, when there were huge diametrical differences in points of view between the two coalitions, or specific members of the coalitions, but the manager had the feeling that a compromise could be reached if all parties lowered their swords, he was not afraid to urge the 'opposing' representatives to meet up in between meetings and present, if possible, a shared solution to the group in the next session. As such, the manager tried to place greater responsibility with the representatives who were 'upholding' the collaborative process (respondent 5).

To deal with the second challenge (that of the power imbalance in the administrative network), the manager used a dual strategy. First, the manager did not allow voting because "voting implies difference, for example, 5 people in favour and 6 people against." An agreement was thus reached if all network members, and thus also the 'smaller' representatives, agreed on a policy proposal. Second, the manager often summarized and reframed the discussions between 'powerful' network members in such a way that the ideas and suggestions of 'smaller' network members appeared to be the missing pieces of a grand puzzle.

According to respondent 4, the main effect of these management interventions was that representatives started looking for certain packaged deals and win-win solutions. For example, in the end, the two coalitions agreed on a package deal concerning the emergence of new economic activities in deprived rural areas.

During earlier meetings, both coalitions had already proclaimed that they recognized the urgency for the development of new economic activities in non-urban areas. Yet, for a long time they did not agree on whether the small scale producers had to be supported in these new economic activities by the government, or the bigger companies which could provide more labour and employment to the region. Eventually, with the help of the aforementioned managerial interventions, the network members realized that they already agreed on ninety percent of the issue; they simply disagreed on how to solve the problem. After this realization, it was just a small step to agree on a toolbox of measures which, in the view of many representatives, created the right balance between stimulating local entrepreneurship and attracting large-scale production companies to rural areas.

What helped the manager's efforts to facilitate dialogue and debate between representatives in the administrative FSSPP network was that he was a civil servant from a horizontal department in the Flemish administration which directly fell under the supervision of the Prime Minister. This horizontal department was established with the purpose to facilitate transversal policy-making in Flanders. As such, the manager was not associated with any particular sectorial stakes or interests. His only job was to create unison between different sectorial interests on behalf of the Prime Minister. Respondent 1 reported that many representative saw the manager as a neutral authority who only wanted to develop the best solutions for spatial planning issues in Flanders.

To circumnavigate deadlocks, the manager sometimes got unexpected help from 'ordinary' representatives in the administrative network. Especially, about discussions on leisure- and sports activities and facilities, two representatives constantly played a brokering role in ameliorating differences between network partners (respondent 5). Specifically, these two

representatives infused new narratives in the deliberations about how the development of recreational areas and business sites could go hand-in-hand, instead of leisure facilities being a compensation product for economic growth areas.

From our empirical data, it was hard to pinpoint whether these 'brokers' took on these roles for their own gain or for the benefit of the collective. The manager did assume that a shared agreement on these matters would also help the brokers develop their policy plans after the discussion on the FSSPP. Nonetheless, due to these interventions of these two ordinary representatives in the administrative network, it became easier for the manager to get the network members moving in the same direction on leisure and sports-related matters.

Retrospectively, respondent 6 argued that overall the manager's interventions as communicator could not change the reality that some representatives held positions in the administrative network where the involvement of their organization accrued more power within the collective. This was also not the main goal of the manager as a communicator. In the end, he mainly wanted to retain a reflexive gaze on the dynamics of the network, to promote effective interactions between the representatives.

## **Discussion and Conclusion**

To conclude, research on the management of collaborative processes of innovation has been quite scarce. Therefore, we examined the management strategies of manager of a Flemish administrative network for facilitating the development of an innovative Spatial Planning Plan in the collaborative arrangement. We used Agger and Sørensen's (2016) taxonomy of management roles as a heuristic to cluster the management strategies and to see what micro-level management interventions respectively enhanced or impeded the collaborative process of innovation in our case.

From our case analysis, it became clear that, despite the positive connotations of the word 'collaboration', in reality, collaborative innovation networks are decision-making arenas where organizational turfs collide. Management, as such, can help to achieve unison and foster the development of innovative policy solutions for complex, intertwined policy problems, like issues of spatial planning. At the same time, in our case, the management itself proved to be a complicated, slippery and sometimes even a plain unworkable exercise. Overall, we believe that on the basis of our case results for each management role of the taxonomy of Agger and Sørensen (2016) a lesson can be drawn regarding how a manager can foster the development of innovative policy solutions in collaborative innovation networks.

The first lesson follows from the way in which the manager of the FSSPP network, in its role as pilot, structured and designed the decision-making and selection process. Specifically, the manager decided to work in two months' time towards a policy document which would have the support of all representatives' organizations and only include ten to fifteen new policy solutions. To achieve this, the manager followed a very strict decision-making and selection procedure. As a result, the representatives experienced that they only had a few opportunities to leave their mark on the new policy plan. Moreover, they were well aware of the fact that if they proposed policy proposals that required too much of a radical policy change, their chances of success (in terms of getting the support from other representatives' organizations)

would decrease. Therefore, they mainly proposed solutions that only demanded a marginal adoption of existing policies. In addition, they showed a lot of foot-draggings to ensure that they were eventually not the ones that compromised on their chosen positions.

Hence, on the basis of these case dynamics, we advise managers in their *piloting activities* not to be overly controlling in steering the decision-making process. In addition, the 'piloting manager' should create sufficient decision-making opportunities for the network members to leave their mark on the (to be developed) innovative policy plan. Otherwise, the network members will start acting strategically and primarily look at their own policy interests. In consequence, the decision-making process will turn into a bargaining and negotiation process, instead of a creative endeavour between involved participants; causing that the newly developed policy solutions tend to become mere marginal adoptions of existing policies, rather than radical new, out-of-box, policy solutions.

This first lesson has some resonance in the collaborative innovation literature. Stevens and Verhoest (2016a) and Agger and Sørensen (2016) respectively argue that the potential for innovation increases if the manager uses a more laissez-faire approach in facilitating the decision-making process. Such an approach places greater responsibility on the network members and makes them more an owner of the collaborative innovation process, instead of a mere individual that is 'allowed' to participate in the process. The network members thus become more involved, which, in turn, increases their commitment to the development of innovative policy solutions.

For the management role of 'whip' the following important lesson stands out in our case study: if the manager does not see it as his or her primary task to direct interventions at changing actor behaviour, these managerial efforts will only have a temporal effect, and the concerns and opinions of the 'shouters' will prevail in the collaborative arrangement. In our case, the manager, in its role as whip, utilized for both introvert as well as dominant representatives different strategies to accommodate their participation in the collaborative arrangement. The effects of these interventions were most noticeable just after the intervention took place, as introverts felt more space to articulate their concerns. Yet, after a short while, the representatives felt back in their routine behaviours. The managerial interventions targeted at changing actors' behaviours thus had no long lasting effect.

Although, the manager wanted to promote collaborative behaviour (i.e. free, transparent and honest talking) among the members in the collaborative innovation network, he did not perceive himself as the manager who pulls information out of introvert people or silences the more dominant representatives. In addition, the collaborative innovation process was in his view not a *kindergarten* and, therefore, he held the opinion that every representative was in the end responsible for its own way of representing and behaving.

Psychological studies point, however, that behavioural changes do not occur overnight or just by a simple (short-term) intervention by a manager. Instead, for each behavioural change, a person has to go through a process starting from precontemplation (i.e. reacting negatively by reflex if we receive ideas from others that we have to change our behaviours), to acceptance, action, and maintenance of a new way of behaving (Prochaska and DiClemente,

1983). To avoid that individuals revert to their negative routine behaviours, they need for a longer period of time guidance and support.

If we relate these suggestions from the psychological literature to the management of behaviours of individuals in collaborative processes of innovation, it is recommended that network managers, in their role as 'whip', really see it as their core duty to cultivate and support, for a longer period of time, behavioural changes among network members for the benefit of the interactive dynamics in collaborative innovation networks. This is, of course, only possible if the manager has sufficient time and can find a way to create conditions that will allow those who are willing to change, to reveal their personal difficulties, experiences, and emotions, and to take the steps necessary to solve their behavioural discomfort.

A third important lesson that follows from our case study is that members of collaborative innovation networks first need to get to know each other before they are actually willing, and most of all capable, to develop innovative policy solutions that move beyond conventional wisdom and practices. This lesson stresses the importance of the manager as 'culture-maker' in the collaborative innovation process.

In our case, we saw that many representatives were foremost busy with what their own organizations could gain from the collaboration. Just like Huxham and Vangen (2005), however, we believe that a real collaborative advantage (e.g. access to new resources, cost-efficiency, or, like in our case, comprehensive innovative policy solutions) can only be created if representatives do not hold on too much to their own organizational instructions and priorities, but instead also take some risk by seeking for more convergence with their partners' goals and interests.

What was mainly holding representatives back from having a more open attitude and appreciation towards the ideas and interests of other representatives' organizations, was a lack of awareness about 'the other'. The representatives neither knew each other very well nor had they much knowledge about what representatives' personal ideas and opinions were or how he or she might respond to criticisms by peers in the administrative network. In addition, more than half of new members were 'new voices' around the table who were not familiar with how 'normally' idea-generation and -development took place in the administrative network.

Therefore, we recommend managers of collaborative innovation networks, in their role as culture-makers, to not directly press for results but take the time to invest in relationship-building, when at the start of the innovation process there are no strong bonds or working relationships between network members. Such a management approach allows network members to get to know each other, and from thereon expand, with more background about the others' goals, behaviours, and intentions, their activities concerning the creation of a radical and innovative policy change.

This third lesson has some similarities with what Bason (2014: 222) describes as the strategy of managing discomfort. According to Bason (2014: 222), one of the biggest challenges for managers of collaborative innovation networks is to get actors 'surrender' to a situation in which they have to explore a problem space with others and search for yet unknown

innovative solutions. Bason also recognizes that particularly at the beginning of an innovation process actors are faced with a lot of uncertainty about the behaviour and intentions of others with whom they have to collaborate. Therefore, he (2014: 223) argues that a manager should take sufficient time to help involved representatives and their organizations to get used to the novel situation and adapt to the 'unknowns' of the collaborative innovation process.

However, in regard to Bason's statement, we do want to make the important disclaimer that the concept of 'sufficient time' should not be used as an excuse to delay the collaborative innovation process. In the end, 'innovation' entails a clear break from past practices and not exactly knowing how these policy changes eventually affect the practices and responsibilities of all involved organizations. As such, we do also agree with Michlewski (2008) when he argues that not all uncertainty and behaviour can be managed and at a certain point the manager and involved individuals should simply embrace the cooperation in order to get things going.

The fourth, and final, lesson that emerges from the case study analysis relates to the management role of 'communicator'. Communicators must be aware that individuals participating in collaborative innovation processes intrinsically, perhaps, see the need to innovate, but as a representative, they are also driven by other motives, like the need to 'win for their organization' in a collaborative process instead of losing. Therefore, a communicator must not demand representatives to leave their individual (organizational) agendas and expectations at the door but instead work with these strategic motives when connecting different parties in the collaborative arrangement.

In our case, many representatives joined actor coalitions to find support for their individual ideas, to strengthen their positions, and to steer the discussions in a predetermined position. The manager did not break up these coalitions or insist that individual representatives stepped beyond their organizational interests. Only when there were diametrical differences, but the manager believed that a compromise could be reached, he intervened and urged the 'opponents' to find common ground on a policy proposal. In consequence, many package deals were made during the collaborative innovation process which satisfied the needs of most representatives of the coalitions. Sometimes, the manager even got help from representatives who acted as brokerages to catalyse the development of package-deals between opposing coalitions.

Hence, these interactive dynamics teaches us that the natural realities of collaboration are oftentimes the opposite of what we pretend them to be. In reality, each representative around the table carries with her or him the expectations, instructions, pressures, and politics of their home-organizations, and he or she will adapt their network behaviours to these factors. Yet, by working with these individual agendas and placing greater responsibility with the representatives, these individual agendas can through coalition-formation, bargaining and negotiation (or, even other forms of interactions) be turned into package deals and shared goals which, in turn, can spur the development of comprehensive innovative policy strategies.

Of course, this research also has certain limitations. In the article, we already addressed the small-N problem of a single case study, and thereby the issue of context-dependent generalizations. Additionally, because we only studied the management of a collaborative innovation process where the network members eventually achieved to develop a policy plan,

but we did not compare our findings to a case where the actors with the help of a manager did not agree on an innovative policy solution, our results and final reflections may have some bias. In consequence, the micro-level managerial approaches that we suggest to be most beneficial given the complex institutional dynamics of our collaborative innovation network, can have a smaller *positive* influence on the interactions between network members than we proclaim.

Therefore, we, first of all, propose that prospective studies examine the management of collaborative networks where the involved actors did not succeed in agreeing on innovative policy solutions. Such an analysis would verify or falsify our research findings for the different management roles. Secondly, we encourage scholars to also look at other complex innovation- and governance contexts. It would, for example, be interesting to see how the management dynamics for the promotion of policy innovations in collaborative networks that operate in multi-level governance structures differ from our case findings. In this way, we believe that the research niche of the management of collaborative innovation networks can further mature, and thereby enrich the scholarly debates on how management can spur collaborative innovation in the public sector.

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## **References**

- Agger, A. & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*. doi: 10.1177/1473095216672500.
- Agranoff, R. (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, 66 (special issue), 56-65.
- Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571.
- Ansell, C., & Gash, A. (2012). Stewards, mediators and catalysts: Toward a Model of Collaborative Leadership. *Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-21.
- Ansell, C., & Torfing, J. (2014). Collaboration and design: new tools for public innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 1-19). New York, N.Y.: Routledge.
- Ansell, C., & Torfing, J. (2014). Collaborating on design – designing collaboration. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 229-239). New York, N.Y.: Routledge.
- Bason, C. (2014). Design attitude as an innovation catalyst. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 209-229). New York, N.Y.: Routledge.

Bryson, J. M., Crosby, B. C., & Middleton Stone, M. (2006). The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature. *Public Administration Review*, 66(special issue), 44-55.

Flyvbjerg, B. (2011). Case study. This is a chapter. In N.K. Denzin, N. K. & Y.S. Lincoln (Eds.). *The Sage Handbook of Qualitative Research*. Thousand Oaks, CA: Sage .

George, A. L., & Bennett, A. (2005). *Case studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.

Huxham, C., & Vangen, S. (2005). *Managing to Collaborate; The Theory and Practice of Collaborative Advantages*. London, United Kingdom: Routledge.

Keast, R., & Waterhouse, J. (2014). Collaborative networks and innovation: the negotiation-management nexus. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 148-170). New York, N.Y.: Routledge.

Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.

Milward, H. B., & Provan, K. G. (2006). *A Manager's Guide to Choosing and Using Collaborative Networks*. Retrieved from the IBM Center for the Business of Government website: [http://www.srpc.ca/ess2016/summit/Reference\\_9-Milner.pdf](http://www.srpc.ca/ess2016/summit/Reference_9-Milner.pdf).

Montin, S., Johansson, M., & Forsemalm, J. (2014). Understanding innovative regional collaboration: metagovernance and boundary objects as mechanisms. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 106-125). New York, N.Y.: Routledge.

OECD. (2014). *Innovating the Public Sector; From Ideas to Impact*. Paper presented at the OECD Conference, Paris, France, November 12-13.

Prochaska, J., & DiClemente, C. (1983). Stages and processes of self-change in smoking: toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51(3), 390-395.

Sørensen, E., & Torfing, J. (2010). Collaborative Innovation in the Public Sector: an analytical framework. *Ritsumeikan Hogaku*, 330(2), 209-236.

Sørensen, E., & Torfing, J. (2011). Enhancing collaborative innovation in the public sector. *Administration and Society*, 43(8), 842-868.

Sørensen, E., & Torfing, J. (2012). Collaborative Innovation in the Public Sector. *The Innovation Journal: The Public Sector Innovation Journal*, 17(1): 1-14.

Stevens, V. (2018, in press). Individual learning behaviour in collaborative networks. This is a chapter. In C. Dunlop, C. Radaelli, & P. Trein, *Learning in Public Policy: Analysis, Modes and Outcomes*. Basingstoke, United Kingdom: Palgrave-MacMillan.

Stevens, V., & Verhoest, K. (2016a). How to Metagovern Collaborative Networks for the Promotion of Policy Innovations in a Dualistic Federal System?. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-26.

Stevens, V., & Verhoest, K. (2016b). A Next Step in Collaborative Policy Innovation Research: Analysing Interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-20.

Termeer, C., & Nootboom, S. (2014). Innovative leadership through networks. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 170-188). New York, N.Y.: Routledge.

Torfing, J. (2017). *Collaborative Innovation in the Public Sector*. Washington, D.C: Georgetown University Press.

Voets, J., Verhoest, K., & Molenveld, A. (2015). Coordinating for Integrated Youth Care: The Need for Smart Metagovernance. *Public Management Review*, 17(7), 1-21.

## Chapter 6

# How to Manage Collaborative Policy Innovation Networks? Practical Lessons from a Flemish Coastal Protection Initiative

Written by Vidar Stevens

### ABSTRACT

Collaborative policy innovation networks are increasingly used as vehicles for fostering innovative policy solutions. However, scholars have noted that the extent to which collaborative networks can actually contribute to the development of innovative policy solutions depends on how they are managed. Empirical research on the management of collaborative policy innovation networks has so far been limited. Therefore, a case is reviewed to add new insights to the link between collaboration, management, and policy innovation. Specifically, the management strategies are examined which helped a Flemish administrative network to develop a radical new Coastal Protection Policy Plan. This study shows that a clear procedural groundwork, playful mediating strategies, and good people knowledge help network managers to facilitate the development of innovative policy solutions in a collaborative network.

**Key words:** collaboration, innovation, management, governance, coastal protection.

**Reference:** Stevens, V. (2017). How to Manage Collaborative Policy Innovation Networks? Practical Lessons from a Flemish Coastal Protection Initiative. *Journal of Public Administration and Governance*, 7(4), 94-116.

## Introduction

This article examines the management of collaborative processes of public sector innovation in networks. It aims to explore how specific management strategies can accommodate interactions between public actors in networks as a means to radically develop new and bold ideas to change policies and services (Eggers and Singh, 2009).

*Management* is in this study understood as, “the micro-level endeavours and interventions of a central actor (‘the manager’) to facilitate collaborative networks, by shaping the conditions under which these networks operate and the involved stakeholders interact with each other” (Voets et al., 2015: 983). *Public sector innovation* is interpreted as, “creative search processes used to develop and realize new ideas and solutions that radically transform the way in which we are imagining and doing things in the public sector” (Ansell and Torfing, 2014:4).

The focus on collaborative processes of public sector innovation is very timely because governments are increasingly searching for ways to tame cross-cutting policy issues. One of the ways of many governments has been to establish collaborative networks (Head, 2008; OECD, 2014). *Collaborative networks* can be regarded as, ‘multi-organizational arrangements in which stakeholders work together to solve problems that cannot be solved, or solved easily, by single actors’ (Agranoff and McGuire, 2003: 4). Particularly, the expectation of policymakers has been that more concerted and innovative policy solutions will emerge for cross-cutting policy problems, as more stakeholders and thus more knowledge, resources, and experiences are included in the decision-making processes (Nambisan, 2008: 11).

Despite the high-flying expectations in the innovative capacities of collaborative networks, scholars have argued that the extent to which collaborations can actually contribute to the development of innovative policy solutions for cross-cutting policy problems depends on the manner in which they are managed (Montin et al., 2014). According to these scholars, the micro-level management of collaborative networks is necessary because stakeholders can hold different problem perceptions, may be reluctant to collaborate, or may paralyze the innovation process for strategic reasons (Agger and Sørensen, 2016; Stevens and Agger, 2017).

Empirical research on the micro-level management of processes of public sector innovation in collaborative networks has, however, remained scarce (Ansell and Torfing, 2014: 126; Sørensen, 2014: 10; Stevens and Verhoest, 2016a; Stevens and Agger, 2017). This lack of research is striking because it means that we (i.e. ‘the scientific community’) do not fully understand how managers can live up to their potential in processes of public sector innovation that take place in collaborative networks. In addition, it implies that we do not have a realistic sense of the value of collaborative networks as vehicles for the promotion of innovative policy solutions.

Therefore, in this article, a new empirical case is reviewed to add new insights to the link between management, public sector innovation, and collaborative networks. More specifically, the efforts of a manager in a Flemish administrative network consisting of 12 persons regarding the development of an innovative and new Flemish Coastal Protection Policy Plan (FCPPP) are reviewed by drawing upon document- and interview data.

This article continues as follows. First, the phenomenon of collaborative innovation is introduced. Then, the current state of the art of the management of collaborative innovation networks and the Facilitative Leadership Model of Ansell and Gash (2012) are discussed. Section five introduces the case specificities and reports the chosen methodology. Section six presents the results of the case analysis. In the final section, the article reflects on the main lessons that can be drawn from this study with regard to the management of collaborative processes of public sector innovation.

## **Collaborative policy innovation in the public sector**

There are different forms of public sector innovation. The academic literature mentions administrative process innovations, technological process innovations, product or service innovations, governance innovations, conceptual innovations and policy innovations (De Vries, Tummers and Bekkers, 2015:154; Duijn, 2009:128). This article specifically focuses on the latter category. Policy innovation is by Sørensen and Waldorff (2014:3) defined as: *“a deliberate effort of governments to formulate, realize and diffuse new problem understandings, policy visions, and strategies for solving unmet societal challenges.”*

Nowadays, it is not uncommon that a policy innovation is the outcome of an innovation process that involves a multitude of organizations (Van Buuren and Loorbach, 2009). The collaborative character of recent policy innovation processes has for the most part been a consequence of the ‘wickedness’, and the intertwined nature, of many of today’s policy issues (e.g. global warming, youth unemployment, poverty, obesity, etc.). Causal relations underlying these policy problems are often numerous and difficult to identify. Developments in one seemingly unrelated policy field can impinge in unpredictable and intricate ways on realities of another policy sector (Ney, 2009). This means that wicked policy problems typically transcend the portfolios of single organizations.

As a result, governments have set up collaborative arrangements as a means to tackle wicked policy problems (OECD, 2014). Here the rationale is that through collaboration across conventional boundaries in the public sector, innovative policy solutions emerge that better fit an intertwined policy context. Sørensen and Waldorff (2014) have called these processes in which multiple representatives from organizations deliberately interact and participate to come up with innovative policy solutions for complex and intertwined policy problems, ‘collaborative policy innovation processes’. This article draws on this interpretation and uses the term ‘collaborative policy innovation networks’ to refer to the collaborative governance arrangements that are central in these policy innovation processes.

## **The state of the art of the literature of the management of collaborative policy innovation networks**

Scholars from planning research and governance studies have pointed out that collaborative policy innovation networks have to be managed to produce innovative policy results (Agger and Sørensen, 2016; Stevens and Verhoest, 2016a; Stevens and Agger, 2017). Agger and Sørensen (2016), for example, indicated that the management of collaborative networks is necessary because stakeholders can hold different problem perceptions, may be reluctant to collaborate or may paralyze the innovation process for strategic reasons.

The management strategies for exercising indirect control over collaborative networks have already been the subject of considerable research, most notably in the network management and governance literature (e.g. Huxham and Vangen, 2005; Milward and Provan, 2006; Agranoff, 2006; Koppenjan and Klijn, 2004). Most of these studies focused on the management of a specific scenario of interdependency-driven network engagement; that is, the reproduction and optimization of existing services or policy solutions but then in an integrated manner. Innovation, however, entails a clear break from the past, and thereby the radical transformation of existing and failed policy practices, ideas, and solutions (Sørensen and Torfing, 2011). Or as Stevens and Verhoest (2016a: 19) state, “within collaborative policy innovation processes, upfront participants barely know what to expect; the only certainty they have is that the to-be-developed innovative policy solutions are meant to act a game-changers and radically alter the way in which an intertwined policy problem is addressed.”

For that reason, scholars have argued that the management of collaborative policy innovation networks is very different from the management of ordinary networks, as managers must not only steer for integrated results and compromises, but also foster creativity and out-of-the-box thinking among participants to develop radically new policy paradigms, and manage the earlier-mentioned ‘unknowns’ that surround processes of innovation in the public sector (Bason, 2014).

Empirical research on the management of collaborative (policy) innovation networks in the public sector is, however, still in its infancy (Ansell and Torfing, 2014: 238). Only a very few scholars have examined the dynamics of collaborative policy innovation networks, and have offered accounts of possible micro-level management strategies that can help managers to facilitate the development of innovative policy solutions or public services (see, for example, Bason, 2014; Stevens and Verhoest, 2016a, Agger and Sørensen, 2016, Keast and Waterhouse, 2014).

Some of the findings and suggestions of these earlier studies are quite contradictory. A good example is a finding of Bason (2014: 220) in comparison to an outcome of the study of Keast and Waterhouse (2014: 166). According to Bason, distortive management strategies (e.g. putting or even forcing organizations beyond their usual comfort zone) act as catalysts for creativity and innovation in collaborative networks. Keast and Waterhouse, on the other hand, argue that integrative strategies, which are about encouraging and stimulating the genuine sharing of information among actors without any form of coercion, are most beneficial to spur idea generation in processes of policy innovation.

Nevertheless, the few conducted case studies and quantitative studies have increased our knowledge about the interactive dynamics and the management of processes of innovation in collaborative networks. The studies in the book of Ansell and Torfing (2014), for example, provided us with more information about the generative mechanisms between collaboration and innovation. Specifically, they have shown that the collaborative capacity to innovate

increases if there is ‘sufficient’ synergy<sup>21</sup>, commitment<sup>22</sup> and learning<sup>23</sup> between involved stakeholders in collaborative policy innovation networks. In line, Stevens (2018) has with the help of the Exponential Random Graph Modelling methodology investigated the determinants that hinder or stimulate learning among stakeholders at the micro-level in collaborative policy innovation networks.

There are, however, still many empirical puzzles that need to be solved (Ansell and Torfing, 2014: 238-239), and various ‘accepted’ truisms which have to be empirically scrutinized (Stevens and Verhoest, 2016b). For example, is it always the case that collaboration ensures that public sector innovation draws upon and brings into play all relevant innovation assets in terms of knowledge, imagination, creativity, courage, resources, transformative capacities and political authority (Sørensen and Torfing, 2012: 5)?

Furthermore, as scholars we need to move beyond the mere development of taxonomies of management roles – and instead focus on the specific micro-level management strategies to see under what circumstances which specific management strategies foster or hinder the development of innovative policy solutions in multi-actor collaborations. Because, up till now, six different taxonomies have been developed: the network management triangle (Stevens and Verhoest, 2016a), the Innovative-Leadership Model of Termeer and Nootboom (2014), the three public design attitudes of Bason (2014), the taxonomy of management roles and tasks of Agger and Sørensen (2016), the therapeutic management role suggested by Stevens (2017b), and the Facilitative Leadership Model of Ansell and Gash (2012).

In consequence, we *inter alia* know that a manager of a collaborative (policy) innovation network has to act as a pilot, whip, culturemaker, communicator, therapist, steward, mediator, or catalyst, and that his or her way of acting must be ‘legitimate’, lead to ‘stability’, and ensure the ‘efficient generation of a shared agreement’. Yet, what we lack is how exactly, in practice, these roles and management goals have to be taken up by network managers to live up to their potential in processes of public sector innovation that take place in collaborative networks. As such, scholars are encouraged to use existing taxonomies and frameworks and go in prospective studies one step deeper, to see what micro-level management strategies respectively enhance or hinder a network manager’s capacities to perform a particular management role to the best of his or her capabilities in collaborative policy innovation networks.

Hence, this article intends to contribute to the scholarly literature by empirically scrutinizing one of the earlier-mentioned network management taxonomies for collaborative processes of innovation. To be more specific, with the help of the Facilitative Leadership Model an empirical case is examined to see what management strategies the network manager respectively used to facilitate the design of innovative policy solutions. In the next section, the Facilitative Leadership Model will be further explained.

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<sup>21</sup> Synergy is by Ansell and Torfing (2014: 11) defined as a social process in which stakeholders bring together complementary resources or capabilities (i.e. resource-sharing).

<sup>22</sup> Commitment, then, is understood as the social process through which actors in groups build consensus and support for a particular policy innovation (Ansell and Torfing, 2014: 11).

<sup>23</sup> Learning is considered as the social process whereby cognitive change occurs as a result of interaction between different stakeholders, which can transform or reframe the collective sense of possibility or generate new ideas (Ansell and Torfing, 2014: 11).

## The Facilitative Leadership Model

According to Ansell and Gash (2008; 2012), the core task of a manager of collaborative (policy) innovation networks is to ‘help’ others to make things happen. ‘Others’ can here be interpreted as the stakeholders in the collaborative policy innovation network that do not possess the mandate of ‘being’ the network manager. Ansell and Gash argue that there are three different roles of managers to help actors make things happen in collaborative innovation processes; as a *steward*, *mediator*, or *catalyst*. These three management roles are the pillars of their Facilitative Leadership Model.

A steward is a manager who facilitates the collaborative network by establishing and protecting the integrity of the innovation process (Ansell and Gash, 2012:6). Although involved actors are encouraged to take ownership in a collaborative innovation process, this often takes considerable work and time. Hence, the task of the steward is to give direction and develop the basis context in which the collaboration can unfold (idem: 7). This will allow a collaboration to turn into an open and inclusive innovation process (idem: 8).

The second role of managers is, according to Ansell and Gash (2012:11), to serve as mediator or broker between different involved stakeholders. Since stakeholders hold diverse perspectives and interests, they often do not see eye-to-eye. Therefore, managers are called upon to facilitate positive exchanges between different stakeholders through adjudication of conflict, to arbitrate between different positions, to stabilize the conditions for positive exchange, and to promote trust-building.

The third role for managers of collaborative processes of innovation in networks is to serve as catalysts (Ansell and Gash, 2012:12). The catalytic role goes beyond a mediating role, in the sense, that a manager must engage with the substantive content of interactions and negotiations with the aim of identifying and using opportunities for producing value. The word ‘opportunity’ is key in these practices, as the manager has to ‘see’ the possibilities and take the risk to push the group of actors into a certain direction to realize something new that is better than the status-quo.

The Facilitative Leadership Model does not assume a hierarchy among the three management roles. Nonetheless, although managers of collaborative processes are called upon to play multiple roles, the salience of these roles may vary with the circumstances and goals of the collaborative policy innovation network. In this article, the focus will be on whether the network manager in the empirical case performed all management roles, and if so, what specific management strategies were utilized to perform these roles, for what reasons, and with what effects. In this way, this article empirically drills down into the management variable and adds to the goal of Ansell and Gash (2012:1) to develop a contingency model for the management of collaborative networks that are used as vehicles for innovation processes in the public sector. The next section discusses the case specificities and the methodological approach of this article.

## Case specificities and methodology

In this article, the focus is on the management practices in a Flemish administrative network consisting of 12 representatives from different departmental organizations and agencies during the development of the Flemish Coastal Protection Policy Plan (FCPPP). The departmental organizations and agencies belonged to two different levels of government (regional and provincial level). The collaborative network can be regarded as an administrative network which was tasked by the political leaders of the two levels of government to prepare a policy document which could launch a political debate on the future challenges and solutions for issues of coastal protection (like coastal erosion, navigation, flood *protection* and hydrologic *issues*) in the Flemish region of Belgium.

The administrative network was established in 2015. For this study, the specific focus is on an 'innovation episode' between December 2015 and September 2016. During this innovation episode, the members of the administrative network deliberately tried to develop a possible new Flemish Coastal Protection Policy Plan (FCPPP). In a policy document was written that the aim of the collaboration was not to generate and propose more or less the same kind of policy solutions, but rather to change the form, content and repertoire of policy actions, and even to transform the underlying problem understanding, objectives and program theory of the conventional governmental strategies (i.e. a radical transformation). This aim aligns with what Sørensen and Torfing (2011) regard as a *third-order* innovative policy change. For that reason, the intention of the process in this administrative network is perceived as a collaborative policy innovation process.

To study the management practices in the administrative FCPPP network, the case study methodology was used. I acknowledge the inherent limitations of using single case studies for extrapolating findings, as was described by George and Bennett (2005). Yet, I also agree with Flyvbjerg (2011: 305) when he argues that a case study can further scientific development by the force of example. To this end, I do not pretend that the findings are fully generalizable or highly theoretical. However, I am convinced that the reflections in this article are helpful in substantiating the development of theory on the impact of management on the innovative capacity of collaborative policy innovation networks.

For the data collection, this article drew on a detailed process mapping based on an analysis of documents, and a series of interviews. The document analysis included: minutes of the meetings, newspaper articles, position papers and policy documents of the representatives' organizations, (draft) versions of the final policy document, agendas of the meetings, and parliamentary decrees. The relevance of the documents was determined by making a selection based on whether the information in the documents said something new or extra about the different stagnations and breakthroughs of the policy innovation process, the various activities of the manager, and the positions of the actors with regard to the problem situation and possible solutions. The document analysis was complete once data saturation was reached.

Subsequently, the interviews helped to gain more insight into the arguments, opinions, behaviours, ideas, attitudes, and experiences of the members of the network with regard to

the need, development and direction of the collaborative innovation process, the interventions of the manager, and the process results. The interviews were semi-structured and the questions concentrated on the key events and insights that followed from the document analysis. In total, thirteen interviews were conducted (the network manager was interviewed twice).

The interviews typically lasted an average of 1.5 hours. Each interview was recorded and transcribed. The respondents were promised anonymity. Therefore, the interviews were numbered and in the text of this article the phrase 'respondent (number)' is used to report quotes from the interviews. The interview data was triangulated by comparing the interview transcripts to each other and to the findings of the document analysis. I followed-up with respondents if I ran into inconsistencies to ask for clarification.

For the coding of both the document- and interview data, the NVivo software program was used. The coding process proceeded in two steps. First, the management roles of Ansell and Gash (2012) were used as grounding concepts to code the documents and the interview transcripts; and, as such, identify and cluster what types of management strategies and interventions were used in the deliberations in the administrative FCPPP network to promote the development of the policy innovation.

In the second coding step the empirical data was coded in such a way that it was retrieved what the reasons were why the manager deployed these management interventions, how the different network members experienced and responded to these management strategies and interventions, and what the eventual effects were of the management strategies on the progress of the collaborative innovation process. The results of the empirical analysis are presented in the next section.

## **The management of the administrative FCPPP network**

### **Steward**

The results section starts by presenting the findings of the management activities of the network manager as 'steward'. As mentioned, the network manager must as steward give direction and develop the basis context in which the collaboration can unfold (Ansell and Gash, 2012). In her role as steward, the network manager showed two different faces. In the first instance, she was very proactive and took a lot of initiative to bring actors together. Once the collaboration was underway, however, the network manager did not give any guidance but merely infused the brainstorm with her own ideas about how the coastal area had to be protected.

The initial proactive management style of the network manager had to do with the fact that in the beginning of the process, the network manager was solely responsible for initiating the collaborative policy innovation process. From the political level of the two levels of government, she had gotten the mandate to start the innovation process, but it was still unclear which organizations had to be a part of the inter-organizational and intergovernmental administrative innovation network (respondent 9). Therefore, she started bilateral meetings with single governmental organizations which had shown interest in being a part of the collaboration (respondent 1 and 9). In these bilateral meetings, the network

manager wanted to have a response to three specific questions: what the expectations of the organizations were, how many FTEs the organizations were willing to dedicate to the collaborative process, and if the organizations could financially support the activities of the collaborative network (respondent 6). In addition, the network manager insisted that the interested organizations signed a contract to ensure that the organizations could not easily withdraw their support for the innovation process if it did not go the way they expected (respondent 4, 6 and 11).

The network manager further made the decision to choose for a so-called LABO-format, which was an often used policy design instrument which allowed civil servants to think about long-term policy plans and solutions without having to consider existing policy plans, law texts, and jurisprudence (respondent 1). Such a LABO-format was a perfect instrument to discuss radical new coastal protection policy solutions without too much interference from politicians, like Ministers or cabinet members (respondent 6). The decision to choose for a LABO-format could count on a lot of approval by the network members, because, according to respondent 5, this gave the civil servants the discretionary space to speak more freely, openly, and out-of-the-box about matters of coastal protection.

A point of critique, however, on the behaviour of the network manager during these initial bilateral talks was that the individual organizational representatives had little idea of why other organizations were interested in the joining the collaboration (respondent 8). For a large part, the bilateral talks were one-way conversations, where the representatives simply had to respond to the questions of the network manager. In consequence, most information about what had been said and discussed, and what promises were made by the network manager during these bilateral talks, remained unknown for the majority of the representatives of the collaborative policy innovation network (respondent 11).

That being said, respondent 11 remembered that the network manager was in the bilateral talks very inspiring. The network manager created a lot of pictures about the 'good things' that could be achieved by working together, for example, a more uniform coastline system, improved and better protected coastal neighbourhoods (urban revitalization projects), or better services (integral coastline protection programs). The promise that was inherent in these pictures was very appealing to many (potential) network members (respondent 1, 4 and 5). As such, despite the fact that the representatives did not know which other parties joined the collaboration, they went to the first meeting with a lot of enthusiasm and high aspirations to make the coastal protection policies future-proof (respondent 8).

During the first general meeting, the representatives saw their network alters for the first time. For most representatives, there was the awareness that the potential of the network would only be achieved if members (and their home organizations) made a genuine commitment to working together (respondent 8). A key strategy to sustain this commitment would be the development of rules that guide actors' interactions and behaviours. Therefore, each person who attended the first meeting looked expectantly at the network manager to tell them more about the time planning, process steps, and working methods within the administrative FCPPP network (respondent 11).

Remarkably, the network manager did not give any guidance. According to respondent 4, “the network manager did not tell the network members how the collaboration would proceed, how the discussions would be organized, and what the final document must look like.” Instead, she mainly started discussing her own plans for protecting the coastal system, without creating an open dialogue. According to respondent 11 and 8, the network manager had many good ideas but she pressed us to collect data and information that would support her views on the coastal planning problemacy and possible solutions. In this way, her coastal vision could serve as a basis for the future plans for the coastal planning policies (respondent 3).

As a consequence of this, what respondent 11 called, ‘non-collegial’ managerial behaviour, in the first four sessions of the collaborative process many network members felt rudderless. The network members were only speaking in little rounds and looking how their own ideas aligned with those of the network manager. In addition, the amount of frustrations of the network members rose rapidly. Some of these frustrations had to do with the fact that the collaborative process was getting nowhere. However, most frustrations had to do with the ‘non-collegial’ behaviour of the network manager (respondent 4 and 8). For that reason, two network members stayed after the fourth meeting to ask the network manager to rethink her stewarding role. They insisted that she would create a more open and inclusive policy process.

In between the fourth and fifth meeting, the network manager had various telephone conversations and email correspondences with these two representatives who had urged her to reconsider her managing role (respondent 5). In these conversations, it became clear that the network manager did not feel very comfortable in her role as network manager (respondent 1). Normally, she would just be one of the representatives, but now she had to sit at the head of the table. She thought that in her stewarding role she could still ‘leave her mark’ on the policy document, but she did not exactly know how to organize a collaboration. As a result of these ‘small talks’, the network manager eventually agreed to take a step back and let another network member be the new leader of the collaborative arrangement. The ‘former’ network manager was also no longer a member of the collaborative network to avoid that the ‘leadership change’ would have a negative effect on the interactive dynamics in the administrative FCPPP network (respondent 1 and 4).

### **Mediator**

The new network manager had clear ideas about how to turn the tide and let creativity flourish in the collaborative policy innovation network (respondent 4). As a first managerial act, she organized a group-therapy session where every network member could voice their concerns and indicate what they wanted to see changed in the process. Some of the network members found the ‘group intervention’ intimidating at first, but after the session, most members were surprised how rewarding this group experience was (respondent 8).

During this group-therapy session, three particular things became clear for the (new) network manager. First of all, the responses of the network members confirmed that also other representatives had doubts about the capacities of the former network manager (respondent 5, 9, and 11). Secondly, between the network members, there were quite some knowledge conflicts or gaps. As respondent 11, for example, noted: “I had no background in the concept of circular economy, and despite the fact that some people made an enthusiastic plead for

using activities of circular economy to revive the coastal areas and make them future-proof, I found it extremely difficult to understand how this would save our dikes, coastal cities, or rural hinterlands.” What frustrated her was that this ‘expert of the circular economy’ did not make any effort to make his contributions to the deliberations more understanding for others. As a result, she had the feeling that the energy immediately sapped out of the discussions when this ‘expert’ member started to talk.

Thirdly, there were certain power and goal conflicts between the members of the administrative FCPPP network (respondent 4). In the collaborative innovation network, the network manager had to deal with departments from different layers of government, which had different Ministers from different political parties. Although, the network manager avoided turning the innovation process into a political game, by inter alia keeping the network a mere administrative network and using the earlier-discussed LABO format, she noticed that most of the representatives in the administrative FCPPP network had difficulty in looking beyond what their senior administrative leaders, cabinet members, and Ministers would think about specific subject matters. In consequence, the deliberations in the administrative FCPPP network were oftentimes intense debates about different time-horizons, policy directions, redistribution of responsibilities, and the breadth of the collaborative policy innovation process (respondent 3, 7 and 9). In addition, network members experienced that certain network alters acted as if they had more right to be a part of the collaborative policy innovation network than others (respondent 11 and 12).

As such, there was a huge mediating assignment for the new network manager. She not only had to resolve the knowledge differences between the network members, but she also had to appease tensions regarding the power- and goal asymmetry in the administrative network. According to respondent 8, “the network manager was not the kind of person who used force, like a harsh tone of speech or strong words, to make the network members collaborate and develop transformative policy ideas.” Instead, she used different kinds of playful group exercises and discussion formats to allow network members get more appreciation for another’s point of view.

To solve the knowledge conflicts or knowledge gaps between network members, the network manager had two playful strategies. First of all, the network manager used the sixth and seventh session to organize small TED talks (respondent 7 and 11). In these meetings, each organizational representative was asked to either present an idea with a compelling new argument behind it which challenges conventional wisdom and practices, or introduce a surprising new service or invention that their network alters had probably not yet heard of. The representatives could only present for five to ten minutes. As such, their presentations had to be very clear and specific. The material from the presentations was, subsequently, used as one of the inputs for the final policy document (respondent 4).

A second strategy which the network manager introduced to reduce the knowledge differences between network members was ‘to get visual’ (respondent 7). That is to say, the network manager urged the members to solve ambiguities by drawing on papers, sketching diagrams and figures, or developing mind-maps (respondent 4). The network manager believed representatives would more easily break through lingering discussions if ideas and statements were turned into figures, maps, and pictures. Hence, by stimulating the network

members to make their plans, concerns, and ideas more visual the network manager hoped that this would boost the imagination of the representatives in the administrative FCPPP network and resolve any misunderstandings or knowledge gaps (respondent 5).

These two mediating strategies had a positive effect. After the two TED talk meetings, representatives had a better idea of what each partner could contribute to the discussions or what someone else's expertise was (respondent 9 and 11). Moreover, many representatives automatically started to prepare as 'homework assignments' all kinds of figures, drawings and diagrams to clarify their contributions to the discussions (respondent 7). To this end, the idea of 'getting visual' became a routine working method in the collaborative network.

To resolve issues of power- and goal asymmetry in the collaborative network, the network manager used other playful strategies. After the TED-talk meetings, she did not immediately press for results (respondent 4). It was not her goal to agree on a policy plan as soon as possible. Instead, she wanted to take the time to brainstorm on a wide range of issues, in the hope that the deliberations would not turn into a 'trenchwar' between different organizational and governmental interests (respondent 11). Hence, every new meeting she started with sharp and edgy statements that urged the network members to look beyond their 'organizational logics' and express their personal issues about certain policy problems (respondent 7). Examples of these statements were: how can we protect the Flemish coast if half of it will be flooded by 2050, or which coastal regions will give us the most economic growth if we can only invest a limited amount of money in our coastal areas? Only when the deadline for drafting the final policy document came up, the network manager started to funnel the brainstorm and search for common ground in the network members' contributions.

One of the big problems the network manager, however, encountered was that many network partners believed that they were very open towards the idea of 'brainstorming', while in reality, they were not (respondent 4). According to the network manager, "most representatives simply wanted to discuss matters at the decision-making table in a clockwise manner, where everybody was given a separate turn to highlight in five minutes what their ideas and concerns were." This was the routine procedure in ordinary meetings. Therefore, besides her strategy to infuse the deliberations with sharp and edgy discussion statements, she introduced another set of playful working methods to not kill the brainstorms. Examples of these playful working methods were: use post-its to simply write down all the remarks and ideas participants had, insist that the representatives were only allowed to leave the room when they as a group had written down 30 or 40 new policy plans, do a small 'tribunal' debate between two representatives with opposing ideas where each of them would try to convince the other network members (who served as audience in these small debates), and celebrate the efforts of representatives by awarding every meeting one member with the title 'innovator of the day' (respondent 7).

A particularly effective method to move beyond entrenched organizational positions and identify joint interests turned out to be the technique of persuasive dialogue (respondent 11). The network members had to move around the room and seek for information about the network alters' underlying core beliefs, goals, desires and preferences. The conversations were supplemented with experts in identified subject areas who presented certain facts and figures about discussion issues (respondent 1). According to respondent 11, this conversation

technique helped network members realize that their views, and those of their network alters, were often not grounded in facts but in emotions and routines. Hence, with these persuasive dialogues members discovered the true causes of their conflicts, which, in turn, allowed them to search for possible ways of moving forward (respondent 1).

Respondent 5 argued that eventually these playful ways of interacting made that representatives were again looking forward to coming to the network meetings. They had a whole different perception with regard to the possibilities in the collaborative process, compared the dynamics during the first four network meetings. In addition, respondent 7 said that as a consequence of these playful methods representatives began to develop a sense of community, “it felt as if we were not only searching as explorers for innovative ways for governments to deal with new (but still unknown) challenges ahead, but also innovating our working methods to achieve results.” Hence, it seemed as if the network manager, with her mediating efforts, had changed the negative momentum into a situation where the network members were more open and willing to generate new insights and policy views through collaboration.

### **Catalyst**

For a collaborative process to turn into an innovative endeavour, it is not merely enough that network members work in harmony towards a shared agreement. A network manager must see to it that members use their creativity and imagination to develop solutions that move beyond conventional wisdom and practices. Therefore, Ansell and Gash (2012) identified the role of ‘catalyst’ as a third management role in their Facilitative Leadership framework. A network manager who acts as catalyst engages with the substantive content of interactions and negotiations with the aim of identifying and using opportunities for producing value, in the sense, that solutions are developed that cannot be achieved by one organization solely.

Within the empirical case, the (new) network manager was, however, not really the person who actively shared her ideas, views, and opinions, or reframed discussions in such a way that intractable policy conflicts were turned into win-win solutions (respondent 4). Respondent 7 noted that instead, the network manager possessed another valuable trait which helped her to catalyse the innovation process: she had good ‘people knowledge’. With ‘people knowledge’ respondent 7 meant, “that the network manager had a good eye for what role individuals could play in the collaborative policy innovation network, how each representative could be encouraged to live up to their (role) potential, and at what point in the discussions certain representatives had to be connected or disconnected to ensure breakthroughs in the development of new innovative policy solutions.”

Especially, in the final three meetings of the collaborative process, she tried to manage and link the individuals in such a way that high-quality policy solutions were designed (respondent 5). In the previous meetings, the network members had with the TED-talks, the sharp and edgy statements, and the persuasive dialogues, already discussed a whole range of ideas surrounding the topic of coastal protection (respondent 1). Now it was time to connect the dots and let the network members turn their ideas into integrated and innovative solutions that would provide decent responses to the future challenges of the Flemish coast. To this end, respondent 7 described the final three meetings as a kind of ‘puppet-game’, where the network manager as ‘puppet-master’ moved the ‘right type of representative’ into positions

from where they (as a group) could effectively decide on what would be written down in the final policy document.

According to respondent 7, “the network manager’s puppet game was an interaction between visionary representatives, devil’s advocates, specialists, and pulse-takers.” For each of these four ‘types of network members’, the network manager used another management approach to make them feel most comfortable with their expected roles in the deliberations. Respondent 7 regarded himself as a visionary representative. He was capable of telling clear stories about how the big transformations within the policy field of coastal planning could look like by the year 2050 and beyond. The visionary people were in the final stages of the collaborative process very important to connect (discussed) innovative ideas of earlier meetings into coherent policy stories. The disadvantage of these visionary representatives, however, was that their contributions were oftentimes very abstract and non-specific (respondent 11). Hence, as soon as network members started to look for more detailed policy solutions to turn the broad policy stories into reality, the network manager was more strict on the contributions of these visionary representatives to the discussions (respondent 4).

The devil’s advocates were the representatives who always wondered what all these out-of-the-box ideas would cost and what in practice these innovative solutions meant for the way in which the government (across the different governmental layers and policy sectors) had to reorganize itself (respondent 7). Oftentimes, there were asymmetrical policy discussions between the visionary representatives and the devil’s advocates (respondent 1). Nonetheless, the antagonism of the devil’s advocates was a valuable tool to check whether an innovative idea was a great solution to coastal problems, or whether these were just solutions for made-up problems (respondent 11). Hence, the network manager used these devil’s advocates to keep questioning the necessity and possible success of proposed innovative policy ideas (respondent 4).

The so-called ‘specialist’ were the representatives who knew everything about laws, parliamentary decrees, political tensions, or technological developments (respondent 7). According to the network manager, “innovating is not just about thinking out-of-the-box – at a certain point in the design-phase the discussion turns into whether the innovative idea can be implemented in the current policy constellation, and if not, what changes are necessary to make the innovation happen.” At these moments in the deliberations, it was thus great to have specialists on board, as their knowledge about, what respondent 1 called the ‘nitty-gritty policy details’, helped the administrative FCPPP network to propose solutions that were not mere ‘policy dreams’ but which also included a roadmap of how these ideas could be implemented. In particular, the network manager used the specialist to write the policy proposals down in the final document (respondent 4).

The fourth, and final, type of representative which the network manager distinguished were the ‘pulse-takers’ (respondent 7). In the collaborative network, there were two people who made sure that in the discussions there was also an eye for the human factor. With human factor, respondent 7 meant, what the consequences were of the proposed policy plans for the people living and working in the coastal areas. During the discussions on innovative new policy plans, most representatives talked about the economic activities, infrastructure, and residential areas in the coastal areas. However, they sometimes forgot when they, for

example, discussed possibilities to flood certain villages for the protection of the rest of the Flemish coast, that in these villages citizens lived (respondent 9 and 11). The network manager, therefore, frequently asked the pulse-takers to comment on whether the discussed proposals were relevant for the citizens living in the coastal areas (respondent 4). Furthermore, the network manager requested the pulse-takers in the final stage of the collaborative process to organize several field trips to give the other network partners a better sense of the problemacy and living conditions in the coastal area (respondent 11).

According to the respondent 8, “it is hard to exactly pinpoint how we went from discussing innovative ideas to a policy document that was supported by all network members.” The network manager argued that, in the end, the network members did most of the work. Respondent 7, however, remarked that you should not underestimate the effect of the ‘puppet-play’ of the network manager in the final stages of the collaborative process. “By linking the right people at the right time in the discussions, the transformative ideas which each of us had during the brainstorm sessions, were not diminished to unimaginary and conventional policy compromises”, argued respondent 7.

What further helped the final deliberations was that the network manager had prepared a long-list of issues and ideas on the basis of what had been suggested in the brainstorm sessions (respondent 1). With this long-list, the final deliberations started. The network manager had also given the members the assignment to elaborate on only five to ten transformative policy ideas to keep the final document tangible and readable for the policymakers (respondent 5). In consequence, the network members could use the long-list to connect certain themes and solutions or cross out ideas that were not relevant, unrealistic or too hard to achieve (respondent 12). After the last meeting, the network manager edited, together with the specialists, the final document before it was sent to the political leaders of the two involved governmental levels.

Looking back on the collaborative process, respondent 1, 7, and 11 were convinced that the innovative potential of the collaborative process was not fully exploited. They argued that this was mainly a consequence of the bad start in the first four sessions. Moreover, the final weeks were very time-demanding. Within twenty days the final three sessions were planned. In these final sessions, the network members had to decide on all policy solutions which would be included in the final policy document and write down all texts. In the view of respondent 8, this left too little time to reconsider the ‘innovativeness’ of the included proposals.

Nevertheless, respondent 5 noted that the new network manager definitely changed the interactive dynamics in the collaborative arrangement. Furthermore, the network members proved to be capable to deliver in four months’ time a document to the political leaders which dealt with the question of the future challenges of the Flemish coast. On the final interview question, whether she would do things differently if she could change the past, the network manager responded that this was not the case, “because management is always context-specific, and this time the context demanded me to step up and alter the momentum of the collaborative process to ensure that an intergovernmental policy agreement was still reached.”

## **Ambassador**

So far, the case results have shown how the network manager performed the roles of steward, mediator, and catalyst. However, from the empirical data, it became clear that the network manager also 'acted as an ambassador'. A network manager acting as ambassador should here be understood as a person who represents the (members of the) collaborative policy innovation network in encounters with external stakeholders. In particular, the network manager invested a lot of her time in remaining on good terms with the nineteen coastal municipalities (respondent 12). In the administrative FCPPP network, organizations from the local level were not included. Yet, the network manager had her specific reasons to keep in touch with all local coastal municipalities.

According to respondent 12, in an earlier collaborative innovation process regarding issues of coastal protection, the involved governmental organizations had completely disregarded the wishes and demands of the local (coastal) municipalities. In fact, no mayor or alderman of any local municipality was invited to join the deliberations in the earlier collaborative process nor updated on the process. The aim of this earlier collaborative process was to provide the Flemish government with various scenarios about how the coastal region could look like by the year 2100 (Vlaamse Bouwmeester, 2013). In total, four scenarios were developed in this earlier collaborative policy innovation process. One of the developed scenarios was very extreme; in the sense, that it suggested that it was the best solution to intentionally flood half of the Flemish coastline to protect the rest of the Flemish cities and municipalities (Atelier Visionaire Kust, 2014). As soon as the results of this earlier collaborative policy innovation process were presented to the press, most of the coastal municipalities (especially, those which were selected to be flooded) torpedoed the policy idea and insisted that no administrative organization continued discussions about future plans for the coastal area without consent and involvement of the local coastal municipalities (De Redactie, 2015). Hence, the network manager of the administrative FCPPP network utilized various strategies to ensure that the municipalities this time did not have the feeling that they were overlooked.

Two specific management interventions were identified in the empirical analysis. First of all, respondent 1 noted that before the deliberations in the administrative FCPPP network started, the 'former' network manager visited all nineteen municipalities. On the one hand, the network manager did this to allow the local municipalities to share their concerns and frustrations about the previous innovation process. On the other hand, the network manager wanted to use these conversations to obtain more information about the expectations of the local municipalities regarding the new collaborative process, and what the municipalities currently were doing regarding matters of coastal protection. Respondent 1 joined the network manager on these visits. He explained: "with these visits we got a better idea of what the municipalities could do on their own (and were already doing) and what problems were too big for a single municipality and which had to be addressed on a bigger scale by collaborations with other municipalities and governmental layers." Secondly, during the deliberations of the administrative FCPPP network, the local municipalities were every two months updated on the progress of the collaborative innovation process. If the local municipalities did not agree with certain ideas or policy suggestions, the network members tried to look for other ways to make the local municipalities feel more comfortable with the proposed policy directions (respondent 1).

Respondent 12 had the feeling that the local municipalities appreciated these management actions (of the manager as ambassador) very much. According to him, “you could notice that we [read: the members of the administrative FCPPP network] regained the trust of most of the mayors and alderman of the local coastal municipalities.” The local municipalities more often shared information and policy documents with the members of the administrative FCPPP network (respondent 4). The ambassador’s role of the network manager was, however, very demanding. Respondent 1 explained, “visiting nineteen municipalities was very time-consuming and did not always fit the agenda.” In his view, keeping the local municipalities updated did not have a negative impact on the deliberations in the administrative FCPPP network. The local municipalities did not have major demands. They just wanted to be recognized as relevant decision-making partners. Hence, the network manager mainly saw the management of the external network dynamics as a necessary endeavour to avoid that all hard work by the representatives of the administrative FCPPP network would have been for nothing (respondent 4).

## **Discussion and conclusion**

To conclude, research on the micro-level management of collaborative policy innovation networks has been limited. Therefore, this article’s focus was on the micro-level management strategies the manager of a Flemish administrative network utilized to facilitate the development of an innovative coastal protection policy plan. The taxonomy of management roles of Ansell and Gash (2012) was used as a heuristic to cluster the management strategies, to see how the manager performed each of the management roles, and to determine which micro-level management interventions respectively enhanced or impeded the collaborative process of policy innovation in the empirical case.

What definitely can be learned from the empirical case is that although managers of collaborative policy innovation processes are called upon to play multiple roles, the relative prominence of the different roles may vary with the antecedent conditions and circumstances in the collaborative network. Specifically, we have seen in the empirical case the salience of the *mediating* network management role, since the network members felt extremely frustrated and rudderless as a consequence of a lack of guidance and support by the network manager in the beginning of the innovation process.

The most important contribution of this article is the identification of a fourth management role for the model of Ansell and Gash (2012): the role of ambassador. In the coding of the empirical data, it was difficult to connect the network management interventions with stakeholders ‘outside’ the administrative FCPPP network to any of the three (original) management roles. I argue that this is due to the inward focus of the Facilitative Leadership Model. With inward focus, I mean a focus on how the collaborative network as a ‘closed entity’ operates, and has to be managed, without having an eye for the external network dynamics. Of course, Ansell and Gash (2012: 8) argue that a process must be open and inclusive but they do not account for the moments when a network manager, as a ‘representative’ of the whole collaborative arrangement, visits and interacts with external stakeholders to ensure that the ‘internal network dynamics’ are not hindered or obstructed. To this end, I believe that the management role of the ambassador is a valuable addition to the Facilitative Leadership Model.

Furthermore, for each network management role, a particular lesson stands out in this article's empirical case. The first lesson follows from the way in which the network manager performed the role of steward. In the empirical case, the network manager did a great job in activating the network members to join the collaboration. However, activating network members did not immediately imply that they all stepped up and actively engaged in determining the course and direction of the joint effort. The network members were not yet comfortable with the idea of working together, and they had no clear groundwork (i.e. rules, planning, and process steps) from where they could start the collaboration. The network manager did not see it as her primary task to give guidance to the collaboration; instead, she mainly used the collaborative process to spread her own ideas about how the coastal area had to become future-proof. In consequence, the network members kept in the first four sessions talking in little rounds without having the feeling that they were getting somewhere.

Therefore, on the basis of these case dynamics, I advise network managers during the initial phase of network formation and initiation, to use a hands-on management approach, and provide network members with enough clarity about the innovation process by making clear procedural decisions (Sørensen and Torfing, 2011). This gives the network members the time to grow a sense of connectedness and network loyalty. From thereon, network members can expand their shared activities regarding the development of innovative policy solutions – which, eventually, allows the manager to take a step back as soon as the network members show that they are capable of determining the course of the innovation process by themselves.

This first lesson has some resonance in the collaborative innovation literature. Stevens and Verhoest (2016a), Agger and Sørensen (2016), and Bason (2014) respectively argue that the potential for innovation increases if, especially in the beginning of the innovation process, the network manager steers the innovation process. In the beginning, the network members actors are faced with a lot of uncertainty. The only certainty they initially have is that the eventual policy plan must act as a game-changer and radically alter the way they are doing things. Hence, a steering network manager can help involved network members at the start of the innovation to adapt to the 'unknowns' that surround processes of collaborative innovation.

A second lesson relates to the management role of the mediator. In the empirical case, the new network manager had a huge mediating assignment. As a substitute network manager, she had to turn a negative momentum characterized by frustrations about the previous network manager and knowledge gaps and goal- and power-asymmetries between network members into a situation where network members on equal-footing would develop policy solutions which moved beyond conventional wisdom and practices. In addition, she had to deal with the expectation of different network members that discussions would take place in a clockwise manner, where everybody was given a separate turn to share their ideas and concerns.

To mediate between network members, the network manager did not use a forceful management style, like a harsh tone of speech or strong words. Instead, she utilized different playful group exercises and discussion formats. In the results section, various of these playful

working methods were discussed. For many network members, these playful ways of interacting were very different from how they normally communicated in collaborative networks. As a consequence of the playful working methods, the network members began to develop a sense of community, since they were not only searching for innovative ways for governments to deal with future challenges of coastal protection, but also innovating their working methods to achieve results. In addition, due to the different playful conversation techniques, it became more easy for network members to notice that their views were often not grounded in facts but rather in emotions and routines. Altogether, this made network members more open to discovering the true causes of their organizational conflicts and more willing to search for possible ways to collaboratively move forward. Hence, I argue that by also 'innovating' the working methods in a collaboration, a manager can foster the creativity and the willingness of network members to work jointly towards innovative policy solutions.

Similar case dynamics and mediating solutions can be found in the empirical innovation study of Keast and Waterhouse (2014). They pointed out that we (as 'scholars') cannot escape the reality that an innovation process is not without power conflicts and negotiations. However, by depoliticizing the decision-making process and without force finding light-hearted ways to encourage network members to look beyond their entrenched organizational positions, they claim that idea generation can most optimally be spurred in processes of policy innovation (Keast and Waterhouse, 2014: 166).

With regard to the third management role of the Facilitative Leadership Model of Ansell and Gash (2012) – that of the catalyst – this empirical study presents another way to create 'collaborative value', i.e. create innovative policy solutions that cannot be achieved by a single organization solely. Ansell and Gash (2012: 12) argue that a network manager must engage with the substantive content of interactions and negotiations with the aim of identifying and using opportunities for producing innovative results in collaborative processes. In this article's empirical case, however, the network manager was not the person who substantively engaged in the policy discussions.

She instead used a kind of puppet-play, where she as a puppet-master, moved the right persons in the right positions at the right moments in the deliberations to ensure that innovative ideas were turned into coherent and comprehensive policy stories. The network members had different ways to communicate and different personality traits. Some people were good in acting as a devil's advocate, whereas others were capable of telling clear stories about how the big transformations within the field of coastal planning and protection could look like by the year 2050. Thus, by connecting the right network members, or terminating interactions when necessary, the network manager was capable to ensure that the transformative ideas of all network members were eventually not diminished to unimaginary and conventional policy compromises. Hence, the third, and final, lesson that can be learned from this empirical case is that 'people knowledge', and the right use of this knowledge in connecting or terminating relationships, is another helpful managerial asset to catalyse the production of collaborative value in processes of policy innovation.

Of course, this research also has certain limitations. In the article, the small-N problem of a single case study, and thereby the issue of context-dependent generalizations, was already addressed. Additionally, because the management of a collaborative policy innovation process

where the network members eventually achieved to develop a policy plan was only studied, and not compared to a case where the actors with the help of a manager did not agree on an innovative policy solution, the results and final reflections of this article may have some bias. In consequence, the micro-level managerial approaches that are suggested to be most beneficial given the complex institutional dynamics of the collaborative policy innovation network can have a smaller positive influence on the interactions between network members than is proclaimed.

Therefore, I, first of all, propose that prospective studies examine the management of collaborative networks where the involved actors did not succeed in agreeing on innovative policy solutions. Such an analysis would verify or falsify the research findings for the different management roles. Secondly, I advise scholars to also look at other complex innovation- and governance contexts. It would, for example, be interesting to see how the management dynamics for the promotion of policy innovations in collaborative networks that operate within a single governmental level differ from the case findings of this empirical article. Thirdly, I encourage scholars to also empirically scrutinize other developed taxonomies of management goals and roles. In this way, the research niche of the management of collaborative policy innovation networks can further mature, and thereby enrich the scholarly debates about how under varying circumstances network management can spur collaborative processes of policy innovation in the public sector.

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## **References**

- Agger, A., & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*. doi: [10.1177/1473095216672500](https://doi.org/10.1177/1473095216672500).
- Agranoff, R. (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, 66(special issue), 56-65.
- Agranoff, R., & McGuire, M. (2003). *Collaborative Public Management: New Strategies for Local Government*. Washington, DC: Georgetown University Press.
- Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571.
- Ansell, C., & Gash, A. (2012). Stewards, mediators and catalysts: Toward a Model of Collaborative Leadership. *Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-21.
- Ansell, C., & Torfing, J. (2014). Collaboration and design: new tools for public innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 1-19). New York, N.Y.: Routledge.

Atelier Visionaire Kust. (2014). Eindrapport Fase 3 deel 2: Exploratief ontwerp onderzoek. Retrieved from the Ruimte Vlaanderen website:

<http://doc.ruimtevlaanderen.be/rapport/20150226-MKL2100-Eindrapport-Deel2 .pdf>

Bason, C. (2014). Design attitude as an innovation catalyst. This is a chapter. In C. Ansell & J. Torfing (Eds.), *Public Innovation through Collaboration and Design* (pp. 209-229). New York, N.Y.: Routledge.

De Redactie. (2015). Wordt Belgische Kust op termijn in tweeën gedeeld?. Retrieved from the De Redactie website:

<http://deredactie.be/cm/vrtnieuws/regio/westvlaanderen/1.2299628>

De Vries, H., Tummers, L. & Bekkers, V. (2014). Innovation in the public sector: A systematic review and future research agenda. *Public Administration*, 94(1), 146-166.

Duijn, M. (2009). *Embedded Reflection on Public Policy Innovation; a relativist/pragmatist inquiry into the practice of innovation and knowledge transfer in the WaterINNOvation program*. Dissertation published by Eburon.

Eggers, W. D., & Singh, K. S. (2009). *The Public Innovator's Playbook: Nurturing Bold Ideas in Government*. Washington, DC: Harvard Kennedy School of Government.

Flyvbjerg, B. (2011). Case study. This is a chapter. In N.K. Denzin, N. K. & Y.S. Lincoln (Eds.). *The Sage Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.

George, A. L., & Bennett, A. (2005). *Case studies and Theory Development in the Social Sciences*. Cambridge, MA: MIT Press.

Head, B. W. (2008). Assessing network-based collaborations: effectiveness for whom? *Public Management Review*, 10(6), 733-749.

Huxham, C., & Vangen, S. (2005). *Managing to Collaborate; The Theory and Practice of Collaborative Advantages*. London, United Kingdom: Routledge.

Keast, R., & Waterhouse, J. (2014). Collaborative networks and innovation: the negotiation-management nexus. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 148-170). New York, N.Y.: Routledge.

Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.

Milward, H. B., & Provan, K. G. (2006). A Manager's Guide to Choosing and Using Collaborative Networks. Retrieved from the IBM Center for the Business of Government website: [http://www.srpc.ca/ess2016/summit/Reference\\_9-Milner.pdf](http://www.srpc.ca/ess2016/summit/Reference_9-Milner.pdf).

Montin, S., Johansson, M., & Forsemalm, J. (2014). Understanding innovative regional collaboration: metagovernance and boundary objects as mechanisms. This is a chapter. In C.

- Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 106-125). New York, N.Y.: Routledge.
- Nambisan, S. (2008). Transforming government through collaborative innovation. *Public Manager*, 37(3), 36-41.
- Ney, S. (2009). *Resolving Messy Policy Problems; handling conflict in environmental, transport, health, and ageing policy*. London, United Kingdom: Earthscan.
- OECD. (2014). *Innovating the Public Sector; From Ideas to Impact*. Paper presented at the OECD Conference, Paris, France, November 12-13.
- Sørensen, E. (2014). *The Metagovernance of Public Innovation in Governance Networks*. Paper presented at the Policy & Politics Conference, Bristol, UK, September 16-17.
- Sørensen, E., & Torfing, J. (2011). Enhancing Collaborative Innovation in the Public Sector. *Administration and Society*, 43(8), 842-868.
- Sørensen, E., & Torfing, J. (2012). Collaborative Innovation in the Public Sector. *The Innovation Journal: The Public Sector Innovation Journal*, 17(1): 1-14.
- Sørensen, E., & Waldorff, S. B. (2014). Collaborative policy innovation: Problems and potential. *The Innovation Journal: The Public Sector Innovation Journal*, 19(3), 1-17.
- Stevens, V. (2018, in press). Individual learning behaviour in collaborative networks. This is a chapter. In C. Dunlop, C. Radaelli, & P. Trein, *Learning in Public Policy: Analysis, Modes and Outcomes*. Basingstoke, United Kingdom: Palgrave-MacMillan.
- Stevens, V. (2017b). Discussion: The Network Manager as Therapist. *Journal of Public Administration and Governance*, 7(3), 118-122.
- Stevens, V., & Agger, A. (2017). Managing Collaborative Innovation Networks – Practical Lessons from a Belgian Spatial Planning Initiative. *Journal of Public Administration and Governance*, 7(3), 154-173.
- Stevens, V., & Verhoest, K. (2016a). How to Metagovern Collaborative Networks for the Promotion of Policy Innovations in a Dualistic Federal System?. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-26.
- Stevens, V., & Verhoest, K. (2016b). A Next Step in Collaborative Policy Innovation Research: Analysing Interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-20.
- Termeer, C., & Nooteboom, S. (2014). Innovative leadership through networks. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 170-188). New York, N.Y.: Routledge.

Van Buuren, A., & Loorbach, D. (2009). Policy innovation in isolation? Conditions for policy renewal by transition arenas and pilot projects. *Public Management Review*, 11(3), 375-392.

Vlaamse Bouwmeester. (2013). Metropolitaan Kustlandschap 2100: de ontwerpopgaven. Retrieved from the Vlaamse Bouwmeester website: <https://tinyurl.com/y9ye26c3>.

Voets, J., Verhoest, K., & Molenveld, A. (2015). Coordinating for Integrated Youth Care: The need for smart metagovernance. *Public Management Review*, 17(7), 1-21.



## Chapter 7

### Discussion: The Network Manager as Therapist

Written by Vidar Stevens

#### ABSTRACT

Collaborative networks are by governments increasingly used as vehicles for fostering concerted and innovative policy solutions. Scholars have, however, noted that the extent to which collaborative networks can actually contribute to the development of concerted and innovative policy action depends on how they are managed. Within the network management literature, we know already various roles a manager can perform to bring about 'collaborative advantages' in collaborative networks. Yet, in this article, I would like to present another role – that of the network manager as therapist – which can help actors in collaborative networks to deal with their discomforts they experience when participating in network processes.

**Key words:** actor behaviour, network management, therapeutic skills, governance, collaboration.

**Reference:** Stevens, V. (2017). Discussion: The Network Manager as Therapist. *Journal of Public Administration and Governance*, 7(3), 118-122.

## **A New Network Management Role**

Network management has been a widely debated subject in the public management and governance literature. Network management is in this article understood as, “the endeavours and interventions of a central actor (‘the network manager’) to facilitate collaborative networks, by shaping the conditions under which these governance networks operate and involved actors interact with each other” (Voets, Verhoest and Molenveld, 2015: 983). In the last 25 years, we have, amongst other things, learned how network managers can spur dialogue in a collaborative network, translate between different experiences and perceptions of task of network members, or reformulate multi-actor conflicts into dilemmas which can be balanced and settled (Huxham and Vangen, 2005; Milward and Provan, 2006; Agranoff, 2006; Koppenjan and Klijn, 2004).

In addition, various taxonomies of management roles and tasks have been developed by scholars to bring about a collaborative advantage in networks, like Ansell and Gash’s Facilitative Leadership Model (2012), the network management triangle of Gaus (Stevens and Verhoest, 2016), the hands-on and hands-off management approaches of Sørensen and Torfing (2011), or the four management roles and tasks of Agger and Sørensen (2016). Agger and Sørensen (2016), for example, argue that managers of collaborative networks must act as *pilots*, *whips*, *communicators*, and *culture-makers* to ensure the formulation and design of concerted and integrated policy actions for the wicked societal challenges of the 21<sup>st</sup> century. In a similar vein, Agranoff and McGuire (2001) suggest that network managers must *activate* network members to collaborate, *frame* discussions, *mobilize* individuals to make a commitment to the joint undertaking, and *synthesize* the network by creating the environment and enhancing the conditions for favourable, productive interactions among network participants.

In my doctoral research, however, I encountered several network management strategies which I could neither connect to existing taxonomies of network management tasks and roles nor to earlier findings of network studies. Hence, in this article, I would like to share my observation that a network manager can act as a therapist, by taking individual network members aside and look with them for ways to cope with their personal dilemmas and discomforts they experience when participating in network processes.

## **Behavioural Discomforts**

This observation follows from my doctoral study. In my doctoral study, I specifically focussed on how collaboration can spur the development of new, creative and concerted policy solutions, and what role management plays in these collaborative innovation processes. Often, governments move from the assumption that creative and innovative policy solutions emerge if more actors and thus more knowledge, resources, and experiences are included in the decision-making processes. I claimed, however, that the extent to which collaborations can actually contribute to the development of creative policy solutions for cross-cutting issues (like immigration, global warming, or spatial planning issues) depends on the way in which they are managed. Actors in collaborations may hold different problem perceptions, may be reluctant to collaborate, or may paralyze the decision-making process for strategic reasons.

Therefore, management is necessary to get participants of collaborations moving in the same direction.

The collaborative networks I studied were, in every sense, collaborative connections between network members. The collaborative networks were all deliberately established with the purpose of formulating innovative, shared and overlapping policy objectives and solutions. The network members themselves were representatives, or what Williams (2002) has called 'boundary spanners', of their departmental organizations. Consequently, from the case studies it turned out that the network members' behaviours were mainly influenced by three particular factors: (1) the expectations and instructions from a network members' political or senior administrative leader; (2) the relationships, connections and behaviours of other network members in the collaborative network; and (3) the network member's personal beliefs, opinions and attitudes. In most instances, the network members determined on the basis of these three factors their behaviour in the collaborative networks, or at least, they kept these factors in mind when engaging with their network peers.

In the interviews, many of my respondents, however, indicated they struggled with choosing an 'appropriate' way of behaving in the collaborative networks. The respondents had different interpretations of the term 'appropriate behaviour', though generally, this entailed they had difficulty in behaving in such a way that their organizational interests were voiced in the network, without upsetting too many network alters or showing forms of actor behaviour that went against their human nature. A shy respondent, for example, states that she felt very uncomfortable to play the decision-making game very roughly, but that there was no other way to secure her organizational interests, since "all other representatives acted as lions to protect their organizational territory." Another respondent denotes that he got the instructions to just go to the network meetings without making too many organizational commitments. Yet, he was of the opinion that his organization could benefit from working more closely with other departments on issues of coastal protection and preservation. As a result, he felt as if he was in a constant balancing act between what he believed was the right thing to do and what his senior administrative leaders expected him to do.

### **A Therapeutic Management Approach**

In the collaborative networks I studied, the network managers utilized various network management strategies to accommodate the participation of network members. For most of these network management strategies, I was able to generalize and relate them to existing findings of network studies or taxonomies of network management roles and tasks.

One network manager, for example, tried to develop a shared language between network members by drafting a glossary of new words and definitions at the end of each meeting. The network manager noticed that during the discussions certain words seemed normal for some participants, while they were jargon for others. The network manager believed that the glossary could serve as a road map to further develop new concepts and program theories that better fit and defined the intertwined nature of spatial planning issues. This network management example aligns with one of the management tasks of the management role *pilot* of the taxonomy of Agger and Sørensen (2016), as they suggest that a network manager

exercising the management role of *communicator* must, among other things, translate between the different views of stakeholders to spur dialogue in the collaborative network.”

However, with regard to a specific cluster of network management strategies, I was unable to link them to existing findings or observations in the network management literature. These were particular one-on-one conversations the network managers in several of my case studies had with individual network members outside the general meetings to better understand their behavioural discomforts, and to discuss ways that would help the individuals to feel more comfortable in the dialogues and discussions in the network. The aims, durations, and frequencies of these one-on-one conversations differed for the network members. Moreover, the focus of these conversations was not so much on how the network manager could better support the individual, but more on how the individual network member, through small cognitive or behavioural changes, would become more at ease with its role, tasks and behaviour in the network setting. The network manager thus acted as a kind of ‘therapist’, and the network members were the ‘patients’ who, through discussing their personal problems with the network manager, hoped to become more comfortable in participating in the collaborative network.

### **The Manager and the Inner-worlds of Network Members**

I believe there are two interrelated reasons why it was difficult to generalize these ‘therapeutic’ network interventions to earlier findings in the broader network management literature. First of all, when reading public management and governance studies it often seems as if scholars have the tendency to merely analyse the management of what Agranoff and McGuire (2001) call the ‘groupware’ of networks (i.e. group-based development processes and the search for collective results). There is relatively limited focus on the personal, or even emotional, state of network members participating in collaborations. Second, when scholars do discuss strategies directed at managing individuals in network settings, they mainly focus on how strategic or opportunistic actor behaviour can be reduced. See, for example, the suggested management strategies of Koppenjan and Klijn (2004) targeted at reducing strategic uncertainty in collaborative networks. Such a view on managing individuals does not start from the intention to nurture the behavioural discomforts network members experience, but rather aims to make network members act according to a predetermined and normative image of the network manager about how individuals should behave in network settings.

To this end, for future research I encourage scholars to study in greater detail the inner-worlds (i.e. ideas, emotions, imaginations, and self-imposed rules) of network members during network processes, and to analyse empirically how network managers try to connect to these inner-worlds in their managing activities. This will enrich our understanding of what cognitively hinders network members in their boundary spanning activities, and how through conversation and guidance a network manager can better accommodate network members’ participation in collaborations. This suggestion for future research has similarities with the call of Grimmelikhuisen, Jilke, Olsen and Tummers (2017) to make more use of theories and methods of psychology to confirm, add nuance to, or extend classical public administration theories. They even argue that Behavioural Public Administration must become a sub-discipline in the Public Administration literature. Hence, I hope that the discussed observation of ‘the network-manager as therapist’ can add to these scholarly developments and can

become a useful focal lens to supplement existing typologies of network management roles. This would, in turn, allow scholars to examine in greater detail neglected terrains or dynamics in network processes, like the network manager's interventions in unofficial circumstances with individual network members to manage their behavioural discomforts.

## References

Agger, A., & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*. doi:10.1177/1473095216672500.

Agranoff, R. (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, 66 (special issue), 56-65.

Agranoff, R., & McGuire, M. (2001). Big Questions in Public Network Management Research. *Journal of Public Administration Research and Theory*, 11(3), 295-326.

Ansell, C., & Gash, A. (2012). Stewards, mediators and catalysts: Toward a Model of Collaborative Leadership. *Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-21.

Grimmelikhuijsen, S., Jilke, S., Olsen, A. L., & Tummers, L. (2017). Behavioural Public Administration: Combining Insights from Public Administration and Psychology. *Public Administration Review*, 77(1), 45-56.

Huxham, C., & Vangen, S. (2005). *Managing to Collaborate; The Theory and Practice of Collaborative Advantages*. London, United Kingdom: Routledge.

Koppenjan, J. F. M., & Klijn, E.H. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. London, United Kingdom: Routledge.

Milward, H. B., & Provan, K. G. (2006). *A Manager's Guide to Choosing and Using Collaborative Networks*. Retrieved from the IBM Center for the Business of Government website: [http://www.srpc.ca/ess2016/summit/Reference\\_9-Milner.pdf](http://www.srpc.ca/ess2016/summit/Reference_9-Milner.pdf).

Sørensen, E., & Torfing, J. (2011). Enhancing collaborative innovation in the public sector. *Administration and Society*, 43(8), 842-868.

Stevens, V., & Verhoest, K. (2016). How to Metagovern Collaborative Networks for the Promotion of Policy Innovations in a Dualistic Federal System?. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-26.

Voets, J., Verhoest, K., & Molenveld, A. (2015). Coordinating for Integrated Youth Care: The need for smart metagovernance. *Public Management Review*, 17(7), 1-21.



## Chapter 8: Final chapter

# **How to manage the Ostrich's dance in collaborative policy innovation networks? Eight managerial reflections.**

Written by Vidar Stevens

### **ABSTRACT**

This dissertation started with the metaphor of ostriches dancing versus seemingly putting their heads in the ground when feeling scared. The comparison was made with the behaviour of civil servants in collaborative policy innovation networks. Some representatives of administrative organizations experienced these collaborative policy innovation processes, “as if they were dancing the Argentinian tango”, whereas others avoided making too many commitments, because they were anxious that this would harm the position of their home-organizations. The articles of this dissertation have offered various insights into the ways managers can facilitate processes of policy innovation in collaborative networks. Furthermore, the scope has been on what determines whether representatives learn more easily from certain network alters than from others. In this final chapter, I want to connect the different research findings of the articles, and draw some broader conclusions regarding the management of collaborative policy innovation networks.

## **Introduction**

This dissertation started with the metaphor of ostriches dancing versus seemingly putting their heads in the ground when feeling scared. The comparison was made with the behaviour of civil servants in collaborative policy innovation networks. Some representatives of administrative organizations experienced these collaborative policy innovation processes, “as if they were dancing the Argentinian tango”, whereas others avoided making too many commitments, because they were anxious that this would harm the position of their home-organizations.

The articles of this dissertation have offered various insights into the ways managers can facilitate processes of policy innovation in collaborative networks. Furthermore, the scope has been on what determines whether representatives learn more easily from certain network alters than from others. In this final chapter, I want to connect the different research findings of the articles, and draw some broader conclusions regarding the management of collaborative policy innovation networks.

Before I go into more detail on providing answers to the research questions of this dissertation, I want to stress that I believe it is time that our research field moves beyond heralding the importance of collaborations as vehicles for policy innovation, and simply starts unravelling the inside dynamics of these collaborative processes. At this point it is well known that, ‘cross-cutting policy problems require an intertwined policy response’ (Ney, 2009), that ‘collaborative networks offer the possibility to create innovative and coherent policy responses for cross-cutting and wicked problems’ (Sørensen and Torfing, 2011; Torfing, 2017), ‘that not all actors in collaborative networks are equally open to working together’ (Teisman, 2000), and that ‘the management of collaborative networks, therefore, is necessary to deal with reluctant actors or other aspects that hinder collaborations’ (Sørensen, 2014; Bason, 2014).

However, if the management of collaborative networks is so important to spur policy innovation, why not examine the management dynamics of collaborative networks more comprehensively? To this end, I hope that this dissertation has encouraged scholars to take a closer look at how collaborative policy innovation networks can ultimately be managed. This final chapter starts by addressing the research questions of this dissertation. Subsequently, the limitations of this study, possible future avenues for research, and the practical implications are discussed. Lastly, the conclusions are presented.

### **Answering the research questions**

For this research, I set out the following main research question:

*How does management enhance collaborative processes of policy innovation?*

This main question was broken down into four sub-questions:

1. How can collaborative processes of policy innovation be conceptualized?
2. What does the literature say about collaborative processes of innovation and their management?

3. How did the network members in the empirical cases interact with each other, and what management strategies did the managers use to facilitate the collaborative processes of policy innovation, for what reasons, and with what effects?
4. When does management foster or hinder the development of innovative policy solutions in collaborative networks?

In the following paragraphs, each of these sub-questions will be answered on the basis of the findings from this dissertation. The answers to these four sub-questions together provide the answer to the main research question.

### **How can collaborative processes of policy innovation be conceptualized? (RQ1)**

Innovation is a magic concept that over the years has been embraced by many OECD governments as a modernization strategy for the public sector (Borins, 2008; OECD, 2014). We have seen in this dissertation that the Belgian federal government and the Flemish government felt the need to step beyond their conventional wisdoms and their sedimented practices of organizing public services, and instead come up with innovative policy solutions to address grand societal challenges (such as climate adaptation, spatial planning, coastal protection, and sustainable mobility).

'Innovation' is, however, quite an 'elusive concept' that often lacks a precise definition (Lloyd-Reason, Muller and Wall, 2002), and with the growing attention it receives in the public sector, there is the risk that the notion of innovation loses its distinct meaning and becomes synonymous with other terms, such as 'reform', 'change', or 'new ideas' (Sørensen and Torfing, 2011: 849). To avoid this, scholars such as Sørensen and Torfing (2011: 849-851), have expended much effort to come up with a definition that captures the exact gist of the concept. They define innovation as, "the intentional and proactive process of actors that involves the generation and practical adoption and spread of new and creative ideas and services, which aim to produce a qualitative change in a specific context."

Particularly, in the second paper of this dissertation I devoted attention to the concept of innovation. I argued, in line with the work of Sørensen and Torfing (2011), that the aforementioned definition ascribes three key aspects that makes the term distinctively different from analytical terms such as 'reform', 'change', or 'new ideas'. The *first* aspect is the intentional and proactive action of involved actors. As Sørensen and Torfing (Idem: 849) argue, "although the process of innovation is an open and unpredictable process, involved actors will deliberately try to change, or even improve, the current state of affairs while simultaneously taking into account present and future demands." This also became evident in each of the three empirical cases, as the members of the collaborative networks had received from the political leaders of their involved administrations the assignment to deliberately look for solutions that would alter the way in which problems were currently solved and addressed.

Second, Sørensen and Torfing (2011) foresee with their definition that innovations are not about delivering more or less of the same kinds of goods, services, or solutions,<sup>24</sup> but rather about changing the form, content, and repertoire of goods, services, and organizational

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<sup>24</sup> This is understood by Hall (1993) as a first order change.

routines,<sup>25</sup> or even transforming the underlying problem understanding, objectives, and programme theory.<sup>26</sup> Such a transition is seen by Sørensen and Torfing as a 'radical' change.

To elucidate, in the case of the development of the Federal Plan for Sustainable Transport, for instance, with the emergence of the environmental and sustainable considerations, a countervailing force against the traditional approach of competitiveness and economic development was posed in the transport sector. Freight transport was no longer solely considered as an instrument for economic growth, but increasingly seen as a big polluter of the environment. Hence, one of the explicit goals for the collaborative policy innovation network was to develop solutions that stimulated intermodal freight transport as an alternative mode of transport, to shift goods away from the roads to the railways and the inland waterways. This concretely meant that the involved actors had the radical idea to burden the road haulage system and make alternative, more sustainable, modes of transport more attractive to use.

Third, the definition of Sørensen and Torfing<sup>27</sup> (2011) indicates that innovation is always relative to a specific context. The new is not necessarily novel to the world, but merely perceived to be new in a particular context or domain (Zaltman, Duncan and Holbek, 1973; Sørensen and Torfing, 2011:850).

In several of the papers, I pointed out that scholars have mentioned that there are different ways in which governments can 'innovate' (De Vries, Tummers and Bekkers, 2014). The academic literature makes mention of administrative process innovations (Daft, 1978; Meeus and Enquist, 2006<sup>28</sup>), technological process innovations (Damanpour and Gopalakrishnan, 2001; Edquist et al., 2001<sup>29</sup>), product or service innovations (Damanpour et al., 2009<sup>30</sup>), governance innovations (Moore and Hartley, 2008; Bekkers et al., 2011), conceptual innovations (Bekkers et al., 2011), and policy innovations (Sørensen and Waldorff, 2014). This dissertation looked particularly at the category of policy innovations. Policy innovation is defined by Sørensen and Waldorff (2014) as the *radical transformation of problem understandings, policy visions, objectives, strategies and/or policy instruments for solving a specific policy problem*.

The decision to focus on the development of policy innovations in this dissertation had to do with the fact that the concept of policy innovation, compared to other forms of innovation in the public sector, has for a large part been neglected in the public sector innovation literature. Or as Sørensen (2016:13) noted, "issues related to innovations in policy, politics and policy deserve more attention since this has not been on the top of the public sector innovation research agenda." She believes that the main barrier to putting policy innovation on the public sector innovation research agenda seems to be the result of disciplinary boundaries.

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<sup>25</sup> This is understood by Hall (1993) as a second order change.

<sup>26</sup> This is understood by Hall (1993) as a third order change.

<sup>27</sup> The definition of Sørensen and Torfing also considers the practical adoption and spread of ideas and services. However, I only looked at the generation of innovative policy solutions (thus not at the service aspect). Neither did I consider the spread and diffusion of these ideas beyond the collaborative arrangements that were studied.

<sup>28</sup> The creation of a 'one-stop shop'.

<sup>29</sup> The digital assessment of taxes.

<sup>30</sup> The creation of youth work disability benefits.

That is to say, public sector innovation was originally developed as part of a public administration research endeavour. Scholarly focus was particularly on the role of different forms of steering (governance innovations), service innovations, and technological innovations (such as the impact of ICT tools on public service delivery) (Osborne and Gaebler, 1992; Kraemer, Andersen, and Perry, 1994). This disciplinary anchorage has prevented the public sector innovation agenda from spreading from governance, technological, and service innovations to issues related to innovations in polity, politics, and policy, which are considered to be more political science issues. Hence, it has been my goal to contribute to the public sector innovation agenda by zooming in on policy innovation processes.

Although the focus on processes of policy innovation is thus relatively new, the phenomenon of policy innovation definitely has some history in the public sector. For example, in the 1980s and 1990s public officials have tried, under the slogan of 'reinventing government', to render public policies more efficient (Osborne and Gaebler, 1992; Sørensen, 2014). However, what makes contemporary policy innovations distinct from their predecessors is the *collaborative manner* in which they tend to emerge. That is to say, it is not uncommon that the generation (and implementation) of innovative policy solutions is the outcome of an innovation process that involves a multitude of (public) actors (Van Buuren and Loorbach, 2009). The collaborative character of recent policy innovations has for the most part been a consequence<sup>31</sup> of the 'wickedness' of many of today's policy issues, and the inability of 'traditional' policy responses to get a hold on these problems. 'Wicked issues'<sup>32</sup> is a term that was coined by Rittel and Webber in 1973.

In layman's terms, wicked problems can be defined as policy problems that are persistent, and generally dealt with in a context of great uncertainty with regard to the nature of the matter and possible solutions (Rittel and Webber, 1973). Causal relations underlying these policy problems are often numerous and difficult to identify. Developments in one seemingly unrelated policy field can impinge in unpredictable and intricate ways on realities of another policy sector (Ney, 2009). This means that wicked policy problems typically transcend the portfolios of individual public sector organizations. 'Traditional' public management responses to complexity and uncertainty, such as technical (expert-driven) solutions and routine administrative solutions,<sup>33</sup> for the most part take place in the hierarchical silo structures of individual public sector organizations, and often do not consider the involvement of other actors (Hartley, 2005). Hence, public sector organizations have had great difficulty in taming the cross-cutting nature of wicked policy problems.

In consequence, governments have set up collaborative governance arrangements as a means to tackle these daunting *and* wicked policy problems. Here the rationale was that, through collaboration across the conventional borders in the public sector, innovative policy solutions would emerge that better fit the wicked policy context, as more stakeholders, and thus more knowledge, information, resources, and experiences are included in the policy-making process

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<sup>31</sup> Apart from wicked policy issues, many governments are confronted with rising expectations of citizens to the quality, availability, and effectiveness of public policies (Sørensen and Torfing, 2010;), and are additionally stimulated to rethink their institutional designs due to the decreasing amount of available resources in the public sector as a consequence of the financial and economic crises (Bekkers et al., 2013; Keast and Mandell, 2014).

<sup>32</sup> There are many examples of such kinds of wicked issues, such as youth unemployment, population ageing, obesity, intermodal transport, poverty, energy, sustainability, immigration, security, etc.

<sup>33</sup> For example, markets, outsourcing, or regulatory prescription.

(Nambisan, 2008:11; Bekkers et al., 2013:13). Carstensen and Bason (2012) have called these ‘temporal institutionalized collaborative arrangements’, in which multiple public sector organizations interact and participate to come up with policy innovations, so-called ‘collaborative policy innovations’. In similar fashion, I used the term ‘collaborative policy innovation networks’ to explicitly refer to the multi-actor collaborative governance arrangements that are central in these policy innovation processes. Specifically, inspired by the definitions of Sørensen and Torfing (2011), Sørensen and Waldorff (2014), and Carstensen and Bason (2012), collaborative policy innovation networks were conceptualized in this dissertation as *‘temporal institutionalized collaborative arrangements in which a multitude of network members deliberately search for and develop policy solutions which radically alter the way in which we are imagining and doing things in the public sector’*.

### **What does the literature say about collaborative processes of innovation and their management? (RQ2)**

Despite the growing interest of governments in collaborative policy innovation networks as vehicles for fostering policy innovations, the academic literature on collaborative innovation is still in its infancy (Ansell and Torfing, 2014: 238). In this dissertation, the focus was on both the interactive dynamics within collaborative policy innovation networks, and the management of these types of network processes.

#### ***Literature on the interactive actor dynamics in collaborative policy innovation networks***

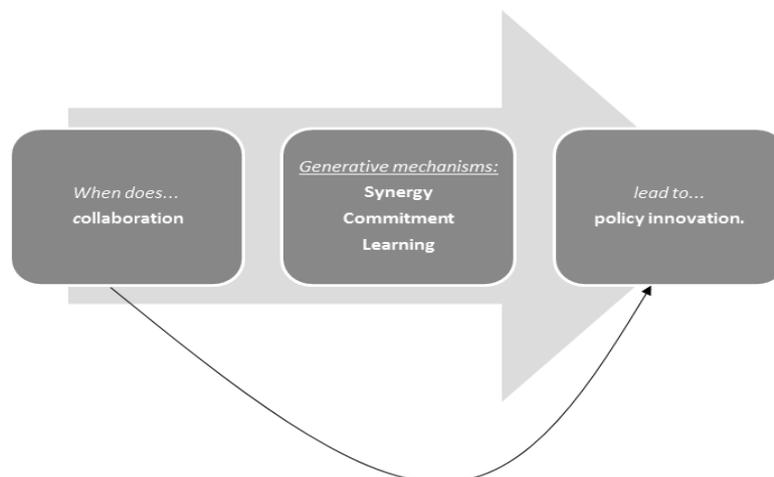
With regard to the available literature on the interactive dynamics in collaborative processes of policy innovation, two generations of studies were distinguished in the second paper of this dissertation. In a first generation of studies, scholars primarily looked at the problems and potential of collaborative processes of policy innovation (Sørensen and Waldorff, 2014; Carstensen and Bason, 2012). In these studies, different process conditions were mentioned that hinder the innovative capacity of collaborative policy innovation networks. As such, scholars tried to gain a better understanding of the general circumstances in which collaborative processes for the promotion of policy innovations operate.

More recently, the second generation of studies has emerged, that specifically looks at the generative mechanisms of collaborative policy innovation. Generative mechanisms can be best understood as the processes by which a causal relation comes about, in this case, why collaboration actually leads to policy innovation (see figure 24).

Often, three generative mechanisms are mentioned in the collaborative policy innovation literature: synergy, commitment, and learning (Ansell and Torfing, 2014: 11; Gray and Ren, 2014: 127; Bressers, 2014: 103). Synergy is defined by Ansell and Torfing (2014: 11) as a social process in which stakeholders bring together complementary resources or capabilities (i.e. resource-sharing). Commitment, then, is understood as the social process through which actors in groups build consensus and support for a particular policy innovation (Ansell and Torfing, 2014: 11; Bressers, 2014: 103). Lastly, learning is considered as the social process whereby cognitive change occurs as a result of interaction between different stakeholders, which can transform or reframe the collective sense of possibility, or generate new ideas (Ansell and Torfing, 2014: 11).

Within this second generation of studies, scholars mainly indicated whether or not these generative mechanisms were present in the analysed cases; and if so, in what ways these were important for the development of the collaborative policy innovation process. Waldorff et al. (2014: 85), for example, stated:

... in the climate management case, synergy, learning and commitment played an essential role in the innovation process. All three mechanisms were important for the implementation of the local climate management initiatives. An important driver for the innovation was the synergy created when the local knowledge of the ECAN ambassadors was combined with the general knowledge of the ECAN coordinator about resources consumption, environmental behaviour and especially the administrative dimensions of the local government. Learning was crucial for the ambassadors in order to get new ideas for local initiatives. Commitment was also crucial for the success of the ECAN from the perspective of the ambassadors.



**Figure 24: The Expected Causality and Generative Mechanisms in Collaborative Policy Innovation Networks.**

Again other scholars point to the fact that the generative mechanisms are closely interconnected, or sometimes even mutually reinforcing. Bressers (2014: 103), for example, wrote:

... the synergy between the innovation stakeholders was reinforced by learning and openness to learning, whereas commitment of these stakeholders also improved the synergy.

In a similar vein, Ansell and Torfing (2014: 12) argue:

... learning may help to build commitment among actors in collaborative policy innovations, which facilitates synergy, which feeds back to shape learning.

Most of these studies have, however, been rather superficial when it comes to making inferences about the actor dynamics in which these three generative mechanisms operate (Ansell and Torfing, 2014: 238-239). That is to say, scholars have not been very explicit about *how*, *when* and *why* individual actors are likely to engage with other actors in practices of learning, resource-sharing and consensus-building in collaborative policy innovation networks. In point of fact, the only behavioural insight that can be derived from existing (case) studies is that not all actors have the same propensity, or ability, to engage with other stakeholders in these three generative processes (Bressers, 2014: 104; Montin et al., 2014: 117; Harris, 2014: 8; Keast and Waterhouse, 2014: 156; Termeer and Nooteboom, 2014: 179).

I argued that this lack of scholarly attention to the behavioural manifestations of actors in collaborative policy innovations was striking, as it means that we (i.e. the academic community) actually have little knowledge about the interactive dynamics within collaborative policy innovation networks, and thus also about the manner in which emergent interaction patterns between actors impact the quality of the generative mechanisms in terms of their contribution to the development, realization, and propagation of a policy innovation. For example, how do individual agencies usually behave in processes of collaborative innovation, what possibly explains different sorts of actor behaviour, how might different sorts of actor behaviour lead to different patterns of social clustering in collaborative networks of innovation, and what impact do different sorts of social clustering, in turn, have on the innovative capacity of a collaborative group of actors?

From a more critical stance, I believe that it could even be argued that, on the whole, scholars have only put a little effort into scrutinizing accepted truisms about the interactive dynamics and corresponding benefits that arise from collaborative processes of policy innovation (Ansell and Torfing, 2014: 238-239), such as 'collaborative interaction facilitates trust-based circulation and cross-fertilization of new and creative ideas between actors', or 'collaboration ensures that public sector innovation draws upon and brings into play all relevant innovation assets in terms of knowledge, imagination, creativity, courage, resources, transformative capacities and political authority' (Sørensen and Torfing, 2012: 5).

Hence, I advocated that for scientific purposes (in terms of scientific progress), and in order to gain a better understanding of the value of collaborations as vehicles for the promotion of policy innovation, it would be wise in prospective studies to devote more attention to the determinants that explain why individual actors engage in, or refrain from, practices of learning, resource-sharing, and commitment-building with some stakeholders and not with others in processes of collaborative policy innovation. This was the most important reason why, in the ERGM article, I focused on actor learning behaviours in collaborative policy innovation networks.

### ***Literature on the management of collaborative policy innovation networks***

When it comes to the literature on the management of collaborative processes of (policy) innovation, I noted in the various papers on the micro-level management practices that, in recent years, we have seen a gradual rise in the number of articles that focus on the management of innovation processes in collaborative networks (Ansell and Gash, 2008). A common starting point of scholars is that they argue that the management of collaborative policy innovation networks is necessary to deal with reluctant actors or other aspects that

hinder the collaboration (Sørensen, 2014; Bason, 2014). In addition, scholars agree on the notion that managers of collaborative innovation processes do not 'command' in the same way as they might do in hierarchical organizations. The reason for this is that collaboration is typically voluntary. In addition, as Bryson, Crosby and Middleton Stone (2006) have indicated, collaboration operates in a 'shared power' world in which different stakeholders control specific resources, and have their own distinct bases of power and authority. Hence, political scientists such as Ansell and Gash (2012: 5) have argued that the key adjective that can be used to describe the management of public sector innovation processes in collaborative networks is 'facilitative', i.e., managers may bear responsibility for steering collaborations toward efficient service delivery, consensus, or creative problem solving, but they must work within the constraints imposed by voluntary action and shared power.

In specifying different management styles and strategies, scholars have mainly taken a contingency approach for explaining the behaviours of managers in collaborative networks. The contingency approach assumes that there is no single best way to exercise the management of collaborative networks, because different tasks, goals, and contexts place distinctive kinds of demands on managers (Agger and Sørensen, 2016). In some collaborations for innovation, for example, the primary challenge of the manager may be to cultivate sufficient trust among the stakeholders. In other situations, the core task of the manager can be to help an already functioning collaboration of stakeholders to be more creative.

However, in the end, only a few scholars have offered accounts of possible strategies managers can use to ensure the development of policy innovations or other innovative outcomes in collaborative networks (see, for example, Bason, 2014; Agger and Sørensen, 2016, Keast and Waterhouse, 2014). Some of the findings and suggestions of these earlier studies are also quite contradictory to one another. A good example is a finding of Bason (2014: 220), in comparison to an outcome of the study of Keast and Waterhouse (2014: 166). According to Bason, distortive management strategies (e.g. putting or even forcing organizations beyond their usual comfort zone) act as catalysts for creativity and innovation in collaborative networks. Keast and Waterhouse, on the other hand, argue that integrative strategies, which are about encouraging and stimulating the genuine sharing of information among actors without any form of coercion, are most beneficial to spur idea generation in processes of policy innovation. Nonetheless, the few studies conducted did increase our knowledge about the management of processes of innovation in collaborative networks.

Furthermore, different taxonomies of management roles and tasks regarding the facilitation of collaborative innovation processes were developed on the basis of these single case studies. Agger and Sørensen (2016: 5), for example, developed a taxonomy of management roles and tasks managers can perform to bring about a 'collaborative advantage' for involved partners. More specifically, they argue that a manager of a collaborative innovation process must act as *pilot*, to give direction to the collaboration and keep it on track, as *whip* to ensure that network members are not reluctant to participate in a collaborative manner in the innovation process, as *culture-maker* to normalize creativity and innovative behaviour in the arrangement, and as *communicator* to spur dialogue in the collaborative arrangement and connect network partners. Other developed taxonomies are: The Innovative-Leadership Model of Termeer and Nooteboom (2014), the four public design attitudes of Bason (2014), and the Model of Facilitative Leadership of Ansell and Gash (2012).

There were, however, still many managerial puzzles that needed to be solved (see Ansell and Torfing, 2014: 238-239). For example, are there different ways of collaboration that can stimulate and strengthen different aspects of the innovation process? If so, what management is needed to support different forms of collaboration? In addition, the applicability of the managerial taxonomies still had to be empirically scrutinized or replicated to other contexts (as they were developed on the basis of single case studies).

To this end, it was my goal to add to theory development regarding the management of collaborative (policy) innovation networks, by looking at the micro-level management and interactive dynamics (with an explicit focus on learning interactions) in collaborative processes of innovation, test the applicability of some of the developed managerial taxonomies, and see whether I could retrieve from the empirical cases some managerial lessons that had not yet been mentioned in the collaborative innovation literature.

**How did the network members in the empirical cases interact with each other, and what management strategies did the managers use to facilitate the collaborative processes of policy innovation, for what reasons, and with what effects? (RQ3)**

In the empirical cases of this dissertation, various interactive dynamics could be observed. Occasionally, for instance, it looked as if the network members acted as mutual learners (Sørensen and Torfing, 2012: 852; Schultz Larsen, 2014). In these situations, ideas, concerns and interests were discussed and shared in an atmosphere of mutual trust. As a result, some involved network members acquired a shared understanding of the fundamental problems (Vinke-de Kruijf et al., 2014), and eventually arrived, through open dialogue, at the most appropriate and supported solution for a targeted issue (Sørensen and Torfing, 2011: 852). See, for example, one of the outcomes of the deliberations in Chapter 5 concerning the emergence of new economic activities in deprived rural areas.

This ‘mutual learning process’ might sound like the ideal interactive dynamics for collaborative policy innovation processes. The observed activity of mutual learning closely aligns with what Argyris (1977) has called ‘double-loop learning’, or what Piaget (1976) has defined as ‘accommodative cognitive processes’. Just like in these two processes, the basic assumptions and understandings of the involved network members (‘the learners’) are challenged and altered through the interactions with network alters (Sørensen and Torfing, 2010).

These mutual learning processes in the empirical cases often occurred in four evolutionary phases – and showed many similarities with the phases model of Iyer (2002). In the first phase, learning between network members was largely unilateral. Actors began to gain an understanding of the intentions, concerns, and goals of the other involved actors. In the second phase, considered by Iyer as *exploration*, the ‘partners’ tentatively started preparing for collaboration by ‘setting ground rules for future interactions’ (Dwyer, Schurr and Oh, 1987: 17). Learning was still unilateral and experiential; however, elements of mutual learning began to emerge. The third phase, termed *expansion*, was characterized by greater trust and an increased ‘investment’ for mutual benefit between the actors. In the fourth phase, classified by Iyer (2002) as *commitment*, the actors moved beyond ‘probing each other’, towards the mutual development of new ideas and solutions for severe policy problems.

For example, again in the case of the discussions on economic activities in deprived rural areas, the network members began to realize as a consequence of their dialogues that they already agreed for ninety percent on a policy solution. This realization eventually helped them to develop a toolbox of measures which struck the right balance between stimulating local entrepreneurship and attracting large-scale production companies in rural areas.

In most situations, however, the interactions between the network members looked more like a strategic game. Learning was not apparent. Instead, through negotiation, turf wars, and struggles, the network members worked towards certain policy goals and solutions. The existence of this strategic dynamic in collaborative processes of innovation was recognized earlier by Aagaard (2010: 5) and Torfing (2013: 308). For me the strategic dynamics showed many similarities with the Rounds Model of Teisman (2000).

Teisman has argued that collaborations are in fact ‘battle of interests’. In his model, Teisman (2000:939) understands the strategic actor interactions as an intertwined clew of a series of decisions taken by the various actors. The interactive process is assumed to consist of different decision-making rounds. In each round, all actors bring forward their problem perceptions, possible solutions, and political judgments (Teisman, 2000: 939). All network members can score points in each round, in terms of a leading definition of the problem and the (preferred) solution. At the same time, a new round can rapidly ‘change the direction of the match’ (Teisman, 2000: 938-939). Despite the strategic intentions of the organizations, during the process the actors will have some sort of recognition of their mutual dependencies (ibidem). That is to say, at the back of the heads of the actors there will be the awareness that none of the organizations has sufficient action potential to unilaterally solve the complex, dynamic, and diversified policy problems (Rhodes, 1996: 657).

Therefore, in the course of the ‘strategic game’ actors will look for a compromise that represents the most optimal outcome for their interests. According to Teisman (2000: 946), “progress is thus made when a ‘compromised’ solution is adopted and supported by a majority of relevant actors.” This statement implies that, if actors do reach an agreement, there will be certain winners and certain losers at the end of the innovation process. Yet, the outcome cannot be considered as final or permanent. The compromise will only last until one or more of the actors are dissatisfied with the outcome, and start a new decision-making round (Teisman, 2000: 947).

This strategic dynamic was particularly evident in the first empirical paper of this dissertation. Between the federal and regional departments there was a great deal of disagreement about how to make transport more sustainable. Multiple decision-making rounds were initiated, in which especially the federal departments adhered to the regional departments’ needs and wishes. Eventually, the innovation process resulted in a stalemate, and even up to today it still remains a challenge to break open these strategic policy-making processes concerning freight transport policies.

In the scholarly literature, both the learning and the strategic perspective have gained traction among collaborative innovation scholars. To some degree, the perspectives can be considered as two extremes of the same continuum. The learning perspective is quite prescriptive. It

inhabits a strong view about how actors ought to behave. The behaviour of actors and their interactions are guided by certain norms (e.g. circulation of ideas, joint ownership, etc.), and it seems inappropriate to challenge these. At the other end of the spectrum, the strategic approach puts much emphasis on the individual gains and losses of actors. These scholars mainly conceive the actors as strategic agents who seek to defend or even improve their position, no matter the costs. Arguably, the strategic approach tends to regard free-riding and shirking behaviour as conventional in processes of collaborative innovation.

In the empirical cases management was mainly targeted at reducing the amount of strategic behaviour among actors, and keeping the dialogue between network members going. In many instances, the network managers kept on repeating the message that innovation could only occur if network members tried to get an understanding of each other's point of view. This required that dialogue was spurred in the collaborative innovation network instead of debates, since 'debating' assumed that there was one 'right' answer; and, in consequence, each network member would claim that they were the only ones that possessed 'the right policy solutions'. The network managers, however, worked from the idea that each network member had a part of the answer to a specific policy problem; and, therefore, they urged the network participants to work, through dialogue, towards a common understanding of a policy issue and explore common ground.

Specifically, the network managers in the cases of the development of the Flemish Sustainable Spatial Planning Policy Plan and the Flemish Coastal Protection Policy Plan saw to it that network participants were not defending their own assumptions as truths, or were only searching for flaws and weaknesses in the positions of network alters. In addition, the network managers kept the deliberations and discussion topics open, and did not seek immediate closure on particular policy discussions.

As a result of the managerial interventions, the network members started to act less strategically – though they did not lose sight of their personal and organizational interests. The form of behaviour that many of the network members used to make their points, felt somewhere in the grey zone of the aforementioned continuum between 'learning' and 'strategic actor behaviour'. In particular, it seemed as if the managerial interventions had turned the network dynamics into a selective context that favoured certain actor behaviours (particularly learning activities) over others. In consequence, network members calculated and selected their possible strategic moves in the light of an appreciation of this selective 'learning' context.

To me this change in behaviour, brought about by management, closely aligns with the rationale of the strategic-relational approach of Hay (2002) and Jessop (2001). The strategic-relational theory has recently emerged in response to the ontological tension between absolute structural determinism and totally free-willed actors (Dommett and Skelcher, 2014:543). It resolves the tension by arguing that structure and volition are analytical rather than empirical categories, and thus the focus of scholarly effort should be on investigating the relations between them (Hay, 2002).

Specifically, the theory suggests that network members are 'strategic selective' (Dommett and Skelcher, 2014: 544). They are reflexive, and behave with the aim of maximizing their interests,

but in accordance with what is allowed by the structure (e.g. 'the network setting') in which they participate. The theory thus does not have a priori assumptions about actor interests, nor does it presuppose that actors are rational agents. The approach merely combines the 'agency into structure' – producing a structured action setting – and the 'structure into the agency' – creating a contextualized actor, or what Hay (2002:128) has called a 'situated agent'.

To this end, what can be learned from the empirical case studies of this dissertation is that, despite the aura of interdependency that surrounds processes of collaborative policy innovation, representatives of administrative organizations will first focus on their personal and organizational interests, before thinking about what kind of transformative policy solutions can be designed and implemented by working together. Management can create an atmosphere and context that favours more collaborative forms of interaction – and thereby reduce the possibility of free-riding actor behaviour. Nevertheless, network members will, on the whole, calculate and select their strategic behaviours in light of an appreciation of the norms that characterize this collaborative context. Hence, in the following section eight managerial reflections will be presented which help network managers to create a more favourable collaborative context for spurring the development of innovative policy solutions

#### **When does management foster or hinder the development of innovative policy solutions in collaborative networks? (RQ4)**

Many micro-level management strategies have already been discussed in the articles of this dissertation. In each of the articles, several lessons were also presented. To answer the fourth research question, I present eight managerial reflections. These managerial reflections are not so much meant as a repetition of the earlier case findings, but rather these reflections must be regarded as the overall conclusions of this dissertation. My conclusions are in no way all-encompassing (i.e. they do not provide a blueprint for how to manage collaborative policy innovation processes). They do, nonetheless, give scholars and practitioners more ideas about how transformative policy processes, such as processes of innovation, can be (optimally) facilitated to find, in a collaborative manner, innovative policy responses to wicked issues, such as coastal protection, sustainable spatial planning, and sustainable transport.

Although scholarly attention for the collaborative aspects of innovation in the public sector is relatively new (Torfing, 2017), the literature on collaboration, and on related concepts such as horizontal coordination, steering, or network governance, is definitely not (Hanf and Scharpf, 1978; Scharpf, 1978; Aldrich, 1979; Milward and Provan, 2006). Neither is the idea new that governmental organizations are increasingly dependent on each other, and on other organizations outside government, for their policy design (Klijn and Koppenjan, 2016: 22; Ansell and Gash, 2008; Agranoff, 2006). Therefore, in this section I also compare my research findings to the results of earlier studies.

#### ***Reflection 1: The general meetings are not the only places where the management of policy innovation processes takes place.***

The main focus of the articles of this dissertation has been on the management dynamics during general meetings on collaborative policy innovation processes. Perhaps the general meetings inside these collaborative arrangements were too much seen as the only place where the management of policy innovation processes took place. However, the empirics have shown that when it comes to inter-organizational contact, the temporal institutionalized

collaborative arrangement is just one 'vehicle' of the management and interaction in innovation processes. Many of the managerial activities take place in informal bilateral contacts between the manager and the (other) individual representatives, and foremost between the network members themselves without any intervention from the network manager.

In the empirical cases, several examples of these informal managerial activities were observed. In Chapter 7, a great deal of attention was devoted to the managerial role of 'therapist'. As a therapist, the network manager had several one-on-one conversations with network members outside the general meetings, to better understand their behavioural discomforts, and to discuss ways that would help the individuals to feel more comfortable in the main discussions and dialogues in the network. In addition, in Chapter 5 the network manager created more informal 'safe-spaces' where introvert network members could, in the company of a small number of network members whom they trusted, share their opinions and thoughts. From a strategic point of view (and in line with the terminology of the Rounds Model of Teisman), these managerial activities can be understood as helping the 'losers' of one of the many decision-making rounds.

Moreover, in Chapters 2, 4, and 5 there is evidence that 'like-minded' network members had their own informal meetings to establish strong policy coalitions, or discuss discrepancies in views to come up with win-win solutions for all parties. The network manager was aware of these strategic coalition-building activities. Hence, when discussions ran aground but the network manager believed a solution could be reached, the manager tried to place greater responsibility with the representatives of the opposing 'policy coalitions' (who were 'upholding' the collaborative process), by urging them to meet up and present, if possible, a shared solution to the group at the next meeting. Furthermore, in Chapter 5 it is noted that one of the strategies of the manager to 'silence' the dominant representatives was to take them aside 'in the corridors' to let them know that he ('as network manager') did not appreciate their way of communicating. Lastly, Chapters 2 and 6 both show that network members also use the 'corridor talks', or informal bilateral email conversations and telephone calls, to provide the network manager with a mirror, and discuss the manager's performance and ways of coordinating. In the empirical case of Chapter 6 this even led to a managerial change, as it turned out that the manager had not been comfortable with her role as 'head of the table'.

Most of these examples have to do with the manager's attempts to foster dialogues and debate, keeping an eye on the balance between 'introvert' and 'dominant' representatives, and making representatives feel more comfortable with their roles and tasks in the innovation process. In contrast, the general meetings were more often the places where decisions were made about procedures and process steps, where the network members voted on the proposed solutions and final document, and where group-building exercises took place to create a sense of community among the group of actors.

This teaches us ('both scholars and practitioners') that within collaborative processes of innovation there is a 'galaxy of places' where representatives meet and interact. All these places synchronously contribute to the course and direction of the innovation process (Popering-Verkerk and Van Buuren, 2016; Verkerk, Van Buuren, and Teisman, 2015).

Moreover, this means that this 'galaxy of places' provides the individual network members with different venues or opportunities, in terms of infusing the deliberations with their concerns and ideas, to strategically leave their mark on the policy innovation process. As such, a network manager needs to have an eye for all these different places and 'sub-processes', to ensure that there are equal 'access' opportunities for all network members.

Besides both these formal and informal processes of interaction, Agranoff and McGuire (2003) have shown that there are often thousands of agreements, grants, contracts, etc. which further influence how organizations approach each other or perceive their interrelatedness. In my dissertation, I did not go in detail into all these contracts, agreements, and financial streams between the representatives' organizations – though I discussed the influence of perceived 'power asymmetries' on the interactions between representatives in Chapters 2 and 5. Yet, the remark of Agranoff and McGuire (2003) further stresses the importance of my first overall conclusion, that the innovative capacity of collaborative networks increases if the network managers are aware of the fact that their jobs, to create a level playing field between network members, are not done after a general meeting has ended and only starts again when another general meeting begins. Successful network management requires that network managers keep an eye on the different places and sub-processes, and also intervene in these more informal settings, to ensure equal access opportunities for all involved network members.

***Reflection 2: Managing collaborative policy innovation networks is also about securing and maintaining the support of the hierarchical home-organizations of each representative.***

The public administration literature has been occupied by the question of how to increase the ability of public sector organizations to cope with change and transformations. Early scholars in the 1920s were primarily interested in ideas of identifying modes of governance and organizational principles that could create stable and legitimate rule, predictable decisions, efficient implementation procedures, and top-down control. Max Weber's (2004, [1922]) ideal-typical model of bureaucracy delivers on all counts, due to its legal-rational foundation, rule-governed practices, horizontal division of labour, and hierarchical decision-making structure.

Whereas Weber perceived stability as a positive contribution to public governance, Anthony Downs (1967) conceived the high degree of stability in public sector organizations as a problem, because it prevents a dynamic adaptation of the public sector to societal changes and conditions. He argued that public sector organizations tend to become increasingly ossified as they grow bigger, and use ever more energy and resources on internal coordination and external boundary wars. This reduces their ability to change as a response to changes in the public sector's environment.

There are also signs and remarks in the collaborative innovation literature that hierarchical (or bureaucratic) forms of coordination and integration stifle innovation. Considine, Lewis, and Alexander (2009 and 2011), for example, point out in their studies that innovators who are more adept at working through relationships outside formal structures and hierarchical control are more able 'to get things done'. In addition, in my encounters with civil servants, I repeatedly heard the strong belief that 'innovation' cannot take place in 'the bureaucracy'. Instead, a familiar conclusion of scholars and practitioners has been that interactive forms of

governance are replacing bureaucratic organizations and 'hierarchies' in the governments' search to enhance the efficiency and effectiveness of their policies and public services (Hood, 1991; Rhodes, 1996; Agranoff and McGuire, 2003; Koppenjan and Klijn, 2004; Castells, 1996).

Although it is true that in processes of innovation we see an increase in the number of horizontal relationships and networked forms of coordination activities between actors, we cannot escape the reality that organizational representatives still spend most of their time working within the hierarchy of their own organization. The examined empirical cases were networks which, over a specific period of time, met as a group monthly, or sometimes more frequently than once a month. The representatives were not 'full-time boundary spanners', whose sole job was to scan and interact with the 'external stakeholders' of their home-organization (Leifer and Delbeck, 1978). Instead, the network members dedicated most of their time to securing a proper feedback loop and coordination with their intradepartmental colleagues, senior leaders, cabinet members, and Minister. In this way, what was being discussed in the collaborative policy innovation network would also 'get a life' within each of the hierarchical home-organizations, and vice versa.

This further suggests that a network manager must acknowledge that a network member's first priority is to satisfy the needs of his or her organization. Hence, a network manager must look beyond the management of the collaborative network, and also consider the POSDCORB (Planning, Organizing, Staffing, Directing, Coordinating, Reporting and Budgeting) dynamics of every organization behind the representatives when facilitating collaborative innovation processes (Gulick and Urwick, 1937). In the empirical cases, the network managers tried to do this by making clear agreements with the senior leaders and political leaders of the departments about how much FTE would be dedicated to the innovation process per organization, how the inter-organizational projects would be financed, and within what timeframe outputs of the collaborative policy innovation processes could be expected. This helped the network manager to secure the support of the departmental organizations, and maintain their commitment even when the process did not go the way it had been planned.

The 'hierarchy' of the home-organization was sometimes also used by the network manager to correct the behaviour of the organizational representative in the collaborative network. Specifically, in Chapter 5, the example is given where the network manager contacted the senior leaders of a very shy representative to inform them that the interests of their organization were not well represented. The network manager hoped that, with a little push from the home-organization, the shy representative would feel more pressure to actively engage in the discussions of the collaborative network. Although this was a 'last resort strategy', this example shows that the hierarchy of organizations can further be used for the benefit of the interactive dynamics in the collaborative policy innovation networks.

Following these different examples from the empirical cases, I would argue, in line with the pleas of, for example, Paul du Gay (2000) and Paul du Gay and Thomas Lopdrup-Hjorth (2016), that we need a more positive assessment of the significance and value of hierarchical organizations for policy innovation processes. Network modes of governance, indeed, provide a context in which creativity, inventiveness, speed, and freedom can flourish. However, the stable foundations of the 'hierarchical' home-organizations of the representatives eventually allow for the amplifying effect of an innovative policy strategy. To this end, as a second

reflection, I argue that network managers must also secure and maintain the support of the hierarchical organizations *behind* the network members, as these separate ‘hierarchies’ can make or break the development, and eventually the implementation and upscaling, of an innovative policy strategy.

***Reflection 3: Managing collaborative policy innovation networks is about continuously demonstrating the value of the joint effort, otherwise network members will not waste their time on participating.***

Another observation from the empirical studies is that collaborative activity must show its worth, otherwise representatives will not waste their precious time on participation. The collaborative administrative networks in this dissertation were not all without stability threats; in some cases, there were many frustrations among network members about the collaboration not getting anywhere. Also, in the case of sustainable transport, it was quite remarkable that the network members took the initiative to sit together, given the fact that the ‘ordinary’ interactions between the different levels of government could best be described as antagonistic. Why then did the administrative networks persist for quite a long time – and in two of the three cases even led to a final shared agreement?

I argue that this is a consequence of the inspirational and motivational behaviour of the network managers in the three cases. Amongst other things, the network managers created pictures of the benefits and ‘other good things’ that could be achieved by working together. This initially activated network members to (at least) see what could emerge from the collaboration. During the innovation processes, the network managers further saw to it that in the deliberations the organizational interests did not prevail, but rather the ‘cross-fertilizations’ of policy ideas and solutions. This allowed the network members to get a better understanding already in an early stage of the innovation process, and sometimes even more appreciation from another’s point of view. In consequence, the value of joint effort became not only visible in the final stages, but also in the intermediary stages of the innovative design process. Thus, the cross-fertilization of ideas served as ‘a carrot on a stick’ for the network participants, to keep on going and look for collaborative value.

In the scientific literature, when scholars speak of ‘collaborative value’ (Austin and Seitanidi, 2012a; Austin and Seitanidi, 2012b) or ‘collaborative advantage’ (Kanter, 1994; Huxham and Vangen, 2013), they often refer to the final result of a collaborative process (e.g. the eventual policy document). However, from the empirical cases it became clear that other forms of value can also be created, which help the network manager to motivate the network members to keep on collaborating for the benefit of the collective.

Ultimately, bringing many parties to the decision-making table leads to the development of integral policy solutions that are owned and implemented by several parties (Moore, 1995; Bardach, 1998:8). Yet, respondents in the cases saw knowledge expansion, getting to know other people that are dealing with a similar policy problem, avoiding duplication in work-activity, access to information, skills that accrue from working together, and the development of an inter-organizational innovative administrative culture (‘a community’) also as value-adding advantages of working together.

Hence, as a third reflection, I argue that the key to sustaining collaborative policy innovation processes, besides showing the network members already at an early stage of the collaboration the worth of working together, is also to emphasise in the management of the collaborative network the different advantages that are created together along the way.

***Reflection 4: At the beginning collaborative policy innovation networks require a strong and steering network manager who sets clear groundwork from where the network members can start collaborating, and from where, subsequently, creativity can flourish.***

A central discussion in the collaborative governance and collaborative innovation literature has been *how* controlling the network manager needs to be in facilitating the collaborative networks. Sørensen and Torfing (2009), for instance, capture this discussion by distinguishing between *hands-off* and *hands-on* management approaches. When using a *hands-off* approach, managers intervene from the side-line by, for example, supplying the collaborative arrangement with resources, political goals and visions, building shared jargon, or developing structures that facilitate interactions (*idem*). In this sense, the network manager helps to set the stage, but does not actively participate in the collaborative arrangement. Some other forms of management are considered more *hands-on* (*ibidem*), because in these situations the managers actively intervene in the collaborative arrangements they created, for example, by managing conflict, brokering compromises, or simply participating as network members (Sehested, 2009: 248).

In a similar vein, Voets et al. (2015) have discussed under what circumstances the ‘shadow of hierarchy’ can best be enacted in order to achieve integrated policy outcomes. The ‘shadow of hierarchy’ is a concept which essentially refers to a government’s, or network manager’s, implicit or explicit threat to intervene hierarchically in a network arrangement. Such an intervention is based on authority, imperative vertical coordination, coercion, and even unilateral top-down decisions (Börzel and Risse, 2010; Scharpf, 1994).

A commonality in these studies is that the scholars all point out that the management of collaborative (policy innovation) networks is a complex and difficult matter, which can easily go wrong. It consists of a careful balancing of two opposites: being able to control the network interactions (i.e. *hands-on*), and granting it the autonomy to function well (*hands-off*). Too much control or coordination undermines the self-governing capacity of the collaborative arrangements, whilst too little intervention might result in fragmentation and a lack of direction in the governance initiatives. Most scholars are, however, unclear under what circumstances a *steering* management style can best be used, instead of a *laissez-faire* approach. Sørensen (2014:10), for example, advises that *hands-off* and *hands-on* management approaches are used in a ‘supplementary’ manner, to bring the collaborative policy innovation processes to a good end.

I support this claim of Sørensen. Nonetheless, from the empirical cases of this dissertation one thing became particularly clear: In the beginning of a collaborative policy innovation process a *hands-on* management approach was desired over a *hands-off* management approach – only when, in due course, the network members prove to be capable of taking control of the interactions in the collaborative process, can the network manager decide to take a step back.

To elucidate, when the examined network managers became involved in emergent collaborations for policy innovation, they found players at the decision-making table that had different preferences, expectations, and working routines. Some people knew each other from other collaborative processes, whereas other network members were complete strangers. Furthermore, in the beginning most of the network members had no idea of the process steps of the collaborative process or working methods. The only certainty they had, was that the eventual agreement would act as a game-changer, and alter the way in which the departments operate, relate to, and interact with each other. Hence, most network participants were hesitant, and most of all prudent, to immediately centre their efforts on reaching a shared agreement on a radical new policy solution. As such, the routine behaviour of network members was to look expectantly at the network manager in the hope that he or she would provide more clarity about, and guidance on, how to proceed.

On the basis of these case dynamics, I am of the opinion that the potential for innovation increases if, at the beginning of the innovation process, the network manager steers the network process, and sets clear groundwork in which the collaboration can unfold. This allows the network members at the start of the innovation process to adapt to the 'unknowns' that surround processes of innovation. From there on, network members can expand their shared activities regarding the development of innovative policy solutions.

***Reflection 5: A collaborative policy innovation process requires an experienced network manager that is confident and experienced enough to improvise at times when there are dysfunctional deliberations.***

What surprised me in the research was that when I asked network managers and members how they eventually were able to forge agreement and arrive at a mutually beneficial course of action, they responded that there had been no clear course of action. They remembered a lot of elements that contributed to arriving at a shared agreement, but what the exact causal chain of managerial actions and interactions had been, turned out to be a huge question mark for most of the network participants.

According to the network manager of the Flemish administrative network for the development of a new coastal protection policy, besides some rational elements of steering, such as having discussion statements, providing the network members with homework, and taking minutes of meetings, a great deal of the managerial activity had been improvised. It had been improvised in the sense that problematic collaborative situations which needed immediate solving (e.g. stalemates, trench wars, or knowledge expansion) were instantly dealt with by drawing on past experiences, intuition, and an element of creativity. She related that in many situations applying improvisational practices may not have led to the 'right' decision; however, at that time the decisions made were deemed to be the most appropriate, given the context and interactive dynamics.

For some the notion of *improvisation* as a form of network management may sound like an oxymoron (i.e. an epigrammatic effect by which contradictory terms are used in conjunction). 'Management' presupposes the 'orderly' arrangement of collaborative processes, whereas 'improvisation' is perceived as the conception of action as it unfolds, by a network manager or members, drawing on the available material, and cognitive, affective, and social resources (Pina e Cunha et al., 1999: 302).

Improvisation has for some years now been a part of, or at least recognized in, organization theory. Remarkably, in early studies improvisation was perceived as an unintended outcome (March and Simon, 1958), or as a managerial and organizational design failure (MacKenzie, 1986). More recently, the perception of improvisation has moved from being an outcome of 'getting things wrong', to being seen as a positive skill in making meaningful decisions, and achieving results within a limited timescale, without optimum information and resources (Leybourne, 2007: 231). My perception of (the value of ) improvisation aligns with the latter view, that of Leybourne, as I believe that mastering the skill of improvisation is essential for dealing with the chaotic and nonlinear process that characterizes the innovative dynamics in collaborative networks (Torfing, 2017).

The first articles that looked at aspects of improvisation within organizational settings used jazz performances as metaphor (Barrett, 1998). A central theme in the jazz performance metaphor is the notion of competence. Improvising requires a base level of competence. Just like jazz players do not have the same levels of competence, this is equally true for network managers.

On the basis of the managerial dynamics in the administrative networks of Chapters 5 and 6, I would argue that what makes a manager good at improvisation includes an ability to quickly analyse and understand what is happening in the network, and a facility for inventing things that appropriately fit in with what is happening in the collaborative policy innovation network. Furthermore, besides these skills, it is very helpful to have a deep knowledge of the policy issues that one is trying to tackle with the network members. In fact, substantive knowledge and vision are probably essential to improvisation. In other words, a network manager needs experience. Hence, I claim, as a fifth reflection, that a network manager needs to have the experience and confidence to be able to improvise at times when the dynamics in the collaborative policy innovation network are far from stable and orderly. At these times, improvisation can help to turn especially dysfunctional deliberations into new opportunities to catalyse or reboot the collaborative innovation process.

***Reflection 6: 'People knowledge', and the right use of this knowledge in communicating with individual network members and in designing the collaborative working methods, is another helpful managerial asset to catalyse the development of innovative policy solutions in collaborative network settings.***

Much of the literature on the management of collaborative innovation processes does not yet focus extensively on how to engage with 'individuals'. Mostly scholars speak of how the network or process as a whole can best be facilitated. Often little attention is given to how individual network members think, behave, and act in collaborative processes of innovation, and how in consequence the network manager can best address them in order to have an impact on their individual actor behaviour.

From the empirical cases, however, it becomes clear that there is no general kind of actor behaviour. In fact, we have seen a multitude of behaviours and different personality traits that characterize individual network members. In addition, especially in the articles on the development of the Flemish Plan of Sustainable Spatial Planning and the Flemish Plan of

Coastal Protection, the network managers used an adaptive management style to target single persons in the hope of changing their way of acting.

To elucidate, in the case of the development of the Flemish Plan of Sustainable Spatial Planning, humour proved to be a powerful weapon to silence the 'dominant' representatives in the administrative network. By making a quip about someone's rigid behaviour or rituals, the manager tried to let these dominant representatives know, in a clear but friendly manner, that there were also other representatives involved in the deliberations. It was not the manager's intention to offend the representatives with his funny remarks. As such, he used this management strategy sparingly, and only used it on those who appreciated this form of communication. Alternatively, the manager would take a dominant or rigid representative aside 'in the corridors', to let him or her know that he did not appreciate their behaviour in the general meetings.

For 'introvert' representatives in the network, the manager had another method. In bilateral talks or conversations with a small number of other representatives, the manager tried to create 'safe-spaces' for introverts, to help them feel comfortable sharing their opinions and thoughts. Another strategy was to directly ask the shy representatives for their opinion on a specific matter during the general meetings. Very occasionally, as a last resort, the manager would contact a very shy representative's senior leaders to inform them that the interests of their organization were not well represented in the inter-organizational arrangement. The manager hoped that, with a little push from the home-organization, the shy representative would feel more pressure to actively engage in the discussions of the collaborative network.

In the case of the development of the Flemish Coastal Protection Policy Plan, the network manager was even more specific, by distinguishing four types of people in the collaborative arrangement: visionary representatives, devil's advocates, specialists, and pulse-takers. For each type of personality the network manager used a different management approach, to ensure that each network member became comfortable with their expected roles and positions in the collaborative innovation process.

The visionary representatives were the people who were capable of telling clear stories about what the big transformations within the policy field of coastal planning could look like by the year 2050 and beyond. In the final stages of the collaborative process the visionary people were very important to connect (discussed) innovative ideas of earlier meetings into coherent policy stories. The disadvantage of these visionary representatives, however, was that their contributions were often very abstract and non-specific. Hence, as soon as network members started to look for more detailed policy solutions to turn the broad policy stories into reality, the network manager was stricter in terms of the contributions of these visionary representatives to the dialogues.

The devil's advocates were the representatives who always wondered what all these out-of-the-box ideas would cost, and what these innovative solutions meant in practice for the way in which the government had to reorganize itself. The antagonism of the devil's advocates was a valuable tool to check whether an innovative idea was a great solution to coastal problems, or whether these were just solutions for made-up problems. Hence, the network manager

'used' these devil's advocates to keep questioning the necessity and possible success of proposed innovative policy ideas.

The specialists were the representatives who knew everything about laws, parliamentary decrees, political tensions, or technological developments. According to the case's network manager, "innovating is not just about thinking out-of-the-box – at a certain point in the design phase the discussion turns to whether the innovative idea can be implemented in the current policy constellation, and if not, what changes are necessary to make the innovation happen." At these moments in the deliberations, it was great to have specialists on board, as their expert knowledge helped the administrative network to propose solutions that were not mere 'policy dreams', but which also included a structured and logical roadmap of how these ideas could be implemented.

The 'pulse-takers' were the people who had an eye for the human factor. During the discussions on innovative new policy plans, most representatives talked about the economic activities, infrastructure, and residential areas in the coastal areas. However, they sometimes forgot about people, for example, when they discussed the possibilities of flooding certain villages for the protection of the rest of the Flemish coast, they did not take into account that citizens lived in these villages. The network manager therefore frequently asked the pulse-takers to comment on whether the discussed proposals were relevant for the citizens living in the coastal areas. Furthermore, the pulse-takers organized field trips to give the other network partners a better sense of the problematics and living conditions in the coastal area.

In the cognitive psychology literature, the idea of individuals having different ways of behaving and processing information is already a well-accepted reality. Specifically, cognitive psychologists have noted that individuals have different 'cognitive styles' (Armstrong, Cools and Sadler-Smith, 2012). The concept of cognitive styles has predominantly been understood as a bipolar dimension that differentiates between an intuitive and analytic way of thinking, acting, and behaving (Hodgkinson and Sadler-Smith, 2003). However, quite recently the three-dimensional Cognitive Style Indicator (CoSI) model of Cools and Van den Broeck (2007) was developed, which distinguishes between creating, knowing, and planning cognitive styles.

First, individuals scoring high on the dimension of the creating cognitive style tend to make decisions primarily based on intuition or gut feeling (Cools, Van den Broeck, and Evans, 2008). Creators search for renewal, see problems as opportunities, and feel comfortable in situations of uncertainty and freedom (Cools and Van den Broeck, 2007). Hence, people with a creative cognitive style have to be addressed in such a way that they get the feeling that they have the autonomy to experiment and think out-of-the-box when they are developing something. For me, this suggestion of how to deal with people who have a creative cognitive style is quite similar to how the network manager in the Flemish Coastal Protection case dealt and worked with the visionary representatives.

Second, people scoring high on the dimension of the knowing cognitive style have strong analytical skills, are proficient in logical reasoning, and search for accuracy (Cools and Van den Broeck, 2007). Knowers like to make informed decisions on the basis of a thorough analysis of facts, and logical and rational arguments (Cools, Van den Broeck and Evans, 2008; Knockaert et al., 2015). They will keep questioning what 'the right' response to a problem will be. To

some extent, the earlier-mentioned personality of the ‘devil’s advocate’ aligns with this cognitive knowing style.

Third, people scoring high on the dimension of the planning cognitive style are attracted by structure, and prefer a well-organized environment (Cools and Van den Broeck, 2007). Planners like to make decisions in a structured, systematic way, and are concerned with the efficiency of the process (Cools, Van den Broeck, and Evans, 2007; Knockaert et al., 2015). This type of cognitive style has similarities to the individuals who were described as ‘experts’ in the case of the development of the Flemish Coastal Protection Policy Plan.

Cognitive psychologists such as Kirton and de Ciantis (1994) have argued that these three different cognitive styles are increasingly seen as a critical intervening variable in work performance. Sadler-Smith and Badger (1998), for example, investigated the human resource implications of cognitive styles. Amongst other things, they concluded that human resource practitioners play a crucial role in fostering individual versatility, and in facilitating innovation through the effective management of cognitive style differences. In similar vein, Volkema and Gorman (1998) find in their study that identifying and understanding each employee’s cognitive style can allow managers to enhance individual and team performance and productivity.

The same can be said for interactive and turbulent inter-organizational processes, such as collaborative policy innovation processes. In the empirical cases we observed that the focus on radical change required the ability and flexibility of network members to work together. In doing so, the manager played a crucial role. In particular, we saw in the Coastal Protection case that by organizing the innovation processes, group exercises, discussion formats, and (individual) tasks in such a way that these activities were compatible with the cognitive styles of the involved individuals, there was less likelihood that the discussed transformative ideas would eventually be reduced to unimaginative and conventional policy compromises.

To this end, I argue, as a sixth reflection, that ‘people knowledge’ (i.e. knowledge of and insight into how individuals process information and act upon it), and the right use of this knowledge in approaching individual network members, is another helpful managerial asset to catalyse the development of innovative policy solutions in collaborative network settings.

***Reflection 7: To spur learning in collaborative policy innovation processes, the network manager must translate between opposing network parties, celebrate exemplary behaviour of network members, and ensure that the ideas and interests of all network members are given equal weight and attention.***

The governance turn in studies of public sector innovation refers, implicitly or explicitly, to the mechanism of learning (see, for example, the focus on the generative mechanism of learning in the studies of Ansell and Torfing’s 2014 book). More specifically, a central theme in collaborative innovation studies is that network-based interactions trigger socialization, problem-solving, reflexivity, and deliberation – and possibly even mutual and collective learning processes (Torfing, 2017). So far, only a handful of empirical studies on learning in collaborative innovative settings exist (Montin, Johansson, and Forsemalm, 2014; Waldorff, Kristensen, and Ebbessen, 2014; Bressers, 2014). This makes it difficult to assess how actors learn individually and collectively in collaborative policy innovation networks. Also in the

broader stream of literature about learning in governance processes, many frustrations have been expressed by authors such as James and Lodge (2003) about the overall theoretical and empirical research evidence in this field.

When scholars talk about learning in collaborative (policy) innovation networks, they often refer to aspects of group learning (e.g. Montin, Johansson, and Forsemalm, 2014). Within these group-level analyses, 'learning' is conceptualized as an emergent property of the collective, instead of an accumulation of dyadic learning activities between individuals in the collaboration. As such, the literature has offered explanations for how (an absence of) learning in collaborations affects group-level outcomes and results (in terms of goal achievement, public value, etc.), but has failed in explaining the differences in learning manifestations *between* individuals in collaborations (Stevens and Verhoest, 2016b: 7).

This lack of scholarly attention to the learning activities of individuals in collaborations is striking. Most importantly, it means that we have little knowledge about what explains emergent learning interaction patterns between individuals in collaborative innovation processes, how these learning interaction patterns impact the development and realization of public sector innovations, and how managers can facilitate individual learning interactions to foster the development of innovations in collaborations. To this end, I devoted quite some attention to the individual learning activities between network members in collaborative processes of policy innovation by using the Exponential Random Graph Modelling (ERGM) methodology.

In the ERGM analysis of individual learning manifestations in the administrative network on the development of the Flemish Sustainable Spatial Planning Plan, I particularly showed that the individual's decision to join tightly clustered learning alliances in collaborations is not something straightforward. Furthermore, the analysis demonstrated that the decision of an individual to show learning behaviour towards another actor in the collaboration mainly depends on whether this other actor shows good, and exemplary, collaborative behaviour, or whether the other actor occupies a position where his or her involvement accrues power within the collective. These findings stress the importance of determinants that influence the individual actor dynamics when it comes to learning in collaborative policy innovation networks.

Following these ERGM results, I propose three specific management strategies for network managers to spur learning activities between network members in collaborative processes of innovation. First of all, it is very important that network managers particularly foster learning activities between 'opposing parties', if they want to develop intertwined policy solutions that move beyond existing practices and routines. Agger and Sørensen (2016: 5) suggest that this can, for example, be done by translating between different perceptions and experiences, or reformulating conflict into dilemmas that can be settled through bargaining and negotiation. Ultimately, such a management approach activates actors to get to know each other and from thereon, with more background and appreciation for others' points of view, expand their group activities to develop an innovative policy plan.

Second, managers of collaborative policy innovation processes are advised to celebrate individuals who show exemplary learning behaviour (by, for example, introducing the award

of ‘innovator of the day’), and set norms in the collaborative arrangement that see creativity, collaboration, and learning not as barriers but as drivers for innovation (Ansell and Torfing, 2014: 10). Such management approaches canonize the ability to make hard new choices as the road to success. In addition, these approaches make it easier for a group of actors to find a modus vivendi where the focus is on creating a ‘collaborative advantage’ (Kanter, 1994), instead of on the individual and organizational gains and losses.

The third, and final, advice to foster learning in collaborative policy innovation processes is to actively see to it that in discussion and learning activities all participants’ ideas and concerns are given enough weight and attention, to avoid that eventually certain interests, concerns, and ideas prevail over others in the dialogues and learning activities.

***Reflection 8: Despite the fact that processes of innovation are not without power imbalances, playful working methods motivate network members to work together.***

From the empirical studies of this dissertation it further became clear that all was not harmony in collaborative innovation processes. Numerous examples of conflicts over organizational turf, contribution of resources, staff time devoted to the inter-organizational process, location of meetings, etc. were mentioned in the case studies. These struggles represent the hidden aspects, or the ‘dark side’, of collaborations. Many of these conflicts had to do with the issue of ‘power’.

Although some network scholars look at collaborative networks as coequal, interdependent, patterned relationships (Klijn, 1996), we could simply not escape the notion that in the empirical cases different actors occupied different role positions and carried different weights. In addition, some network members even adapted their behaviour in accordance with the ‘perceived’ power asymmetries in the collaborative network.

For example, several actors acted as ‘core’ players by exploiting their powerful positions to control network exchanges (Rowley, 1997: 903). Other network members, in contrast, showed a certain kind of ‘hermit-like’<sup>[1]</sup> behaviour in the network interactions. Yet others tried to get the most out of their ‘mediocre’ position by navigating between the different interests of the ‘core’ actors in the innovation process. By striving for parity among strong competing interests, these actors created room to articulate their own concerns in the deliberations on the collaborative policy innovation (Rowley, 1997: 902; Oliver, 1991: 157).

These power imbalances were not a real obstacle to innovation in the collaborative networks, as long as the ‘little players’ had the feeling that network alters listened to them and incorporated their ideas. What particularly helped the network managers to deal with the power imbalances were what I labelled, in the case of the development of the Flemish Coastal Protection Policy Plan, ‘playful management strategies’.

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<sup>[1]</sup> Hermit-like behaviour refers to an Avoidant Personality Disorder (AvPD). This is a cluster C personality disorder recognized in the Diagnostic and Statistical Manual of Mental Disorders. Individuals afflicted with the disorder are often described as people who feel unwanted and isolated from others. They possess feelings of inadequacy, are extremely sensitive to negative evaluation, and quite often avoid social interaction. When translated to organizational behaviour, hermit-like behaviour should be understood as the likelihood to adopt a solitary role and position in interactions on collaborative policy innovation.

To elucidate, many representatives in this empirical case supported innovation. They saw it as a fantastic opportunity to find better solutions to tackle complex and intertwined policy problems. Yet, one of the big problems was that many network members thought that they were experts in *innovating*, while in fact they were not. They insisted that the innovation occurred in the setting of a regular meeting – meaning that everybody was taking notes, and waiting for their turn to speak and deliberate in an orderly manner. In consequence, every network member mainly used ‘their time to speak’ to articulate their organizational interests and look for flaws in the positions of their network alters. As a result, many of the deliberations turned into organizational trench wars.

However, when the network manager introduced less ordinary – and more dynamic – working methods, the network members began to develop a sense of community, since they were not only searching for innovative ways to deal with future challenges of coastal protection, but also innovating their working methods to achieve results. In the empirical case, two particular playful working methods seemed to have a positive effect on the collaborative atmosphere in the administrative network.

First of all, the network manager started several of the meetings with sharp and edgy statements. Examples of these statements were: ‘How can we protect the Flemish coast if half of it will be flooded by 2050?’, and: ‘Which coastal regions will give us the most economic growth if we can only invest a limited amount of money in our coastal areas?’ These statements urged the network members to look beyond their ‘organizational logics’ and express their personal issues about certain policy problems.

Second, a particularly effective method to move beyond entrenched organizational positions and identify joint interests turned out to be the technique of persuasive dialogue. The network members had to move around the room, and seek information about the network alters’ underlying core beliefs, goals, desires, and preferences. The conversations were supplemented with experts in identified subject areas, who presented certain facts and figures about discussion issues. This conversation technique helped network members to realize that their views, and those of their network alters, were often not grounded in facts, but in emotions and routines. Hence, with these persuasive dialogues members discovered the true causes of their conflicts, which in turn allowed them to search for possible ways of moving forward.

Of course, not all power struggles and challenges to collaboration will be eliminated by introducing playful working methods. Actors who really want to preserve the status quo, or have a strong preference for a particular innovation outcome will certainly exercise their power, and try to block the innovation process or shape the innovative design in accordance with their ideas and preferences. However, the case studies have shown that playful working methods can at least reduce the blunt display of direct power in actor interactions, and motivate network members to work more closely together towards the development of innovative policy solutions. Hence, as an eighth and final reflection, I argue that playful working methods decrease the probability of a collaborative policy innovation process running aground due to conflict and power asymmetries.

## **Research limitations**

In the previous sections, the broader conclusions of this dissertation were presented. However, it is vital to realize that this dissertation also has certain limitations. For each empirical study, several limitations have already been discussed. It is not my intention to repeat the limitations for each single article. Instead, in this section I will reflect on the following main limitations of this dissertation: (1) the use and generalizability of revelatory case studies, (2) the concern of recall bias, (3) the use of social network data in social science research, and (4) the discrepancy between collaborative policy innovation processes and ordinary policy-making processes.

### **The use of the case study methodology**

To study the management practices in the collaborative policy innovation networks, the case study methodology was used. Using case studies for research purposes remains one of the most challenging of all social science endeavours (Yin, 2009: 3). Although the case study methodology is a distinctive form of empirical inquiry, and allows for the study of one particular social phenomenon extensively and in depth, various scholars nevertheless criticize the research methodology. More particularly, case study methodology has been viewed by a number of researchers as a less desirable form of inquiry than either experiments or surveys (Yin, 2009). Often, three concerns are given regarding the use of case study research.

First of all, among researchers there has been concern over the lack of rigor in case study research. Too often the case study investigator is sloppy, does not follow systematic procedures, or allows equivocal evidence or biased views to influence the direction of the findings and conclusions (idem: 16). A lack of rigor is less likely to be present when a researcher uses other methods, such as surveys and experiments, because of the existence of numerous methodological texts about the specific procedures that need to be followed by scholars. Nonetheless, the books of Yin (2009) and Boeije (2009) do provide case study researchers with procedural steps about how to develop case studies, obtain empirical data, and code data in a structured manner.

To avoid sloppy work, I followed a systematic data collection and analysis procedure. More particularly, after collecting documents and conducting interviews, I first coded all network management strategies that came up in the transcribed interviews and document texts, and subsequently, for each network management strategy, I tried to find out why this strategy was used, and how the network members perceived the use of the strategy and its impact on the collaborative innovation dynamics. Besides the coding of the strategies, I did a process analysis to understand at what stage of the process the network management strategy had been utilized. In this way, I tried to follow a transparent process of data collection, data coding, and data analysis.

A second frequent complaint about case studies is that they take a great deal of time, and they result in massive, unreadable documents. I have to be honest and state that most of my articles are longer than the scientific standard of 8000 words. I am therefore definitely guilty of producing massive texts. Whether these texts are unreadable is perhaps more a matter of taste. On average, my data collection, analysis, and writing process in respect of a single case study lasted approximately seven to eight months, which is a normal timespan for conducting

research and writing a scientific article. To avoid articles becoming unreadable documents, I used the network management roles or goals as building blocks for the texts. This specifically helped to connect my empirical observations to theoretical expectations, and to cluster the numerous strategies that were distilled from the document and interview analyses.

The third, and greatest, concern about case study research is that case studies provide little basis for scientific generalization, as was described by, *inter alia*, George and Bennett (2005). Especially, when a single case study design is used, as was done in this dissertation. Throughout the years, scholars have frequently discussed the question: How can a social scholar generalize from a single case? The short answer to this question is that this is not possible with single-case studies, as these do not represent a sample, as in the case of, for example, statistical analysis. Normally, the goal of studying single cases is therefore to unravel certain case dynamics (explorative value), or to expand or generalize theories (analytic generalization), but not to enumerate frequencies (statistical generalization).

Nevertheless, in selecting the empirical cases, I tried to differentiate the cases in terms of complexity (e.g. multi-sectoral and multi-level governance settings) and success (i.e. did the network members reach an agreement in the design phase or not). As such, despite the fact that I did not select multiple cases that would allow for a cross-case comparison, I do believe that the empirical findings of these different case dynamics (each in their own right) further scientific development by force of example (Flyvbjerg, 2011: 305). Hence, I do not pretend that my research findings are fully generalizable. However, I am convinced that the reflections and managerial lessons from my articles are helpful in substantiating the development of theory on the impact of management on the innovative capacity of administrative processes of policy innovation, particularly in Belgium.

### **The concern of the recall bias**

The second limitation has to do with the aspect of recall bias. The standard procedure to gain a better understanding of the learning activities, interactive dynamics, and management interventions in collaborative policy innovation networks was to ask respondents to look back, retrospectively, on the case dynamics. The limitation of this approach is, however, that respondents can provide inaccurate or biased data. Within the academic literature three primary reasons are given why respondents will not answer accurately when being asked a question about a past event: they are motivated to do so, their perceptual and cognitive limitations result in inadvertent errors, and they lack crucial information about the event of interest (see Huber and Power, 1985). I will elaborate on each of these reasons.

First of all, some respondents are motivated to give inaccurate or biased responses by forces such as the needs for achievement or social acceptance. Evidence of these forces as sources of data inaccuracy is given in various research studies (O'Reilly, 1978). Respondents may want to project an image of adherence to socially desirable practices or norms (Feldman and March, 1981). Especially in processes of collaborative innovation, I noticed that many respondents argued that they were the 'real innovators', and that certain network alters burdened the collaborative process.

Again other respondents may invent stories to appear very knowledgeable or important. For example, I remember one interview in which the respondent 'made up' an informal meeting

with network alters. He said that due to this meeting the course of the innovation process had changed drastically. In his view, he was the catalyser of this process change. However, network alters did not remember this meeting. Neither were they convinced that this respondent went out of his way to bring the collaboration to a good end. The triangulation of the interview data thus helped to distil 'true' responses from biased, inaccurate responses. However, it remains a challenge for social scientists to really classify certain data as inaccurate or biased.

The second reason for biased or inaccurate reports relate to people's cognitive limitations in processing data (March and Simon, 1958). People have limited, imperfect recall, and seem to be influenced by their espoused mental theories when they reconstruct the past (Ericsson and Simon, 1980). For example, when a respondent was left with an unpleasant feeling about the collaborative policy innovation process, he or she would evaluate most events during the process more negatively than they were actually experienced by the respondent at the time.

Biased responses can also be a result of the so-called hindsight bias (Fischhoff and MacGregor, 1982). The hindsight bias leads people retrospectively to see an event as having been inevitable, regardless of their predictions before the event. They not only tend to view what happened as having been relatively inevitable, but also to view it as having appeared relatively inevitable before it happened (Fischhoff and MacGregor, 1982). This may definitely have influenced my analysis of the managerial interventions. For example, respondents might have overlooked certain network management strategies, as these were perhaps 'cognitively classified' by respondents as useless to change an inevitable course of action.

A third source of data inaccuracy is the respondents' lack of information or knowledge. Network process involves multiple actors, of whom a significant number may lack full information. In these situations, second-hand information and imagination may fill in information gaps, and lead to unintentional inaccuracies.

It is hard to measure to exactly what extent these biases have affected my case findings. I believe that especially in the data of the final two empirical cases I reduced the amount of recall bias, since I could survey and interview all members of the administrative network. This provided me with the possibility to compare all individual perspectives to each other. Nevertheless, the different forms of recall bias remain a challenge a scholar has to deal with if a back-mapping research strategy is used (i.e. retrospectively studying the case dynamics).

### **The use and limitations of the ERGM methodology**

The third limitation of this dissertation is related to the use of the Exponential Random Graph Modelling methodology. The ERGM methodology can be regarded as an inferential social network analysis technique. Over the past decades, increasing numbers of social scientists have made use of social network techniques (Borgatti, Mehra, Brass, and Labianca, 2009). This growing interest has resulted in major advances in the methods of social network analysis. Advances have been made primarily in quantitative methods, such as the ERGM methodology (Goodreau, 2007; Cranmer, Desmarais, and Menninga, 2012).

We have seen that quantitative social network methodologies can be used to study complex interactive dynamics; they offer an efficient way to describe and make inferences about the interactive dynamics in social structures (Stevens, 2018; Stevens and Verhoest, 2016b). The

downside to the use of quantitative social network techniques is that they also abstract a great deal from the actual complexity of social systems in two ways (Schipper and Spekkink, 2015).

Specifically, Schipper and Spekkink argue that although quantitative social network techniques are capable of capturing the form of relationships between actors (intensity, frequency, or strength), they are largely blind to the content of these relationships (Knoke and Yang, 2008). Second, they argue that, with some exceptions, these quantitative methods are used to study static structures, and they largely neglect the changes that these structures undergo (Knoke and Yang, 2008; Wolbers, Groenewegen, Mollee, and Bim, 2013). That is to say, while interactive social systems, such as collaborative innovation processes, are highly dynamic, the representations of such systems that quantitative social network techniques create, and work with, are often static as they are frequently only ‘measured’ at one time moment. This hampers our understanding of the mechanisms responsible for the emergence and development of the interactive dynamic social structures.

These two downsides also apply to the way in which I designed the ERGM analyses. The learning variable does consist of three socio-cognitive learning behaviours (for exact operationalization see Chapter 4). However, the results in the ‘learning articles’ only give an insight into *who* interacts with *whom*, but not into what was discussed between two or more network members, or what the purposes of these interaction patterns were. Therefore, I suggested in the article presented in Chapter 4 to consider for future studies, as an alternative approach, to incorporate the ERGM methodology in a mixed-method design (with interviews, document analysis, or archive research), and supplement the statistical network analyses with qualitative data, to provide more context to the significant and non-significant ERGM results.

In addition, I only measured the learning dynamics at one time interval. However, an integrated set of extensions called ‘tergm’ to the ‘ergm’ package in *R* has recently been developed to analyse and simulate network evolution based on exponential-family random graph models (ERGM). This *TERMG* (i.e. Temporal Exponential Random Graph Modelling) methodology thus allows for making inferences about the *change* in network dynamics in collaborative work processes (Handcock et al., 2015). Hence, I would definitely use this *TERMG* methodology if I were to do the research design again.

### **The discrepancy between collaborative policy innovation processes and ordinary policy-making processes**

A final, but necessary, question that still needs to be addressed is whether the focus of this dissertation was really on the management of collaborative processes of innovation, or whether it could be the case that ‘normal’ decision-making processes were examined. This is a complicated question to respond to. What makes the question particularly complicated is the reciprocal nature of the concept of innovation. That is to say, when scholars speak of innovation, they refer to *processes* that are initiated to produce a radical change in a policy (i.e. *outcome*). The assessment of this innovation outcome, however, in terms of whether a radical change in the policy was eventually achieved or not, determines how ‘innovative’ the process really was.

In addition, I focused only on the administrative decision-making processes in specific ‘innovation episodes’, and not on entire decision-making processes including the eventual

decisions by the political actors. These factors therefore make it even more difficult to value the ‘innovativeness’ of the entire policy-making process. Furthermore, innovation processes can be directed at changing different policy artefacts, or at aiming for different innovation outcomes at the same time, such as societal perceptions, values and standards, vocabularies and jargons, institutions and their policy arrangements, policy objectives and public services, policy measures and resources, etc. Hence, it is hard to determine to what extent a process and its result can be regarded as innovation.

Because of this complexity, scholars often argue that a policy-making process turns into an innovative endeavour when the *desire is deliberately pursued* to operationalize a shift of the existing policy paradigm (Sørensen and Torfing, 2012; Sørensen and Waldorff, 2014; Duijn, 2009: 129). Here a policy paradigm must be interpreted as the clusters of assumptions, beliefs, policy theories, and policy objectives, which taken together make up an interdependent network of commitments to guide policy processes in a specific policy domain (Burke, 1979; Alink, 2006). To make their point regarding this distinction between policy innovation processes and normal processes of policy-making even clearer, innovation scholars often refer to the distinction Kuhn (1962) made between ‘normal science’ and ‘revolutionary science’.

Specifically, Kuhn (1962) showed in his book *The Structure of Scientific Revolutions* that in disciplines such as psychology, mathematics, or physics, a broad and leading theory with specific underlying assumptions would often prevail over other pre-paradigmatic theories. This dominant theory is considered to be the ‘normal science’. As a consequence of new insights and research findings a normal science theory can be confronted with anomalies. These anomalies need to be puzzled out and solved *within* the dominant normal science paradigm. Only if an anomaly, or series of anomalies, successfully resists deciphering long enough and for enough members of the scientific community, the dominant scientific paradigm will come under challenge and, perhaps, be subjected to a paradigm shift. When enough anomalies have thus accrued against the current paradigm, a scientific discipline is thrown in a state of crisis, or what Kuhn considers *revolutionary science*. During this crisis, new ideas and theories are tried. Eventually, a new leading paradigm is formed, which gains its own followers, and an intellectual battle takes place between the supporters of this new paradigm and the hold-outs of the old paradigm.

Analogous to the concept of ‘normal science’, innovation scholars state that ‘normal policy-making’ should be understood as ‘thinking inside the box’. Policy-makers continue to solve new societal problems in the same way as they normally do – or at least, with the same convictions and policy assumptions. However, governments can also become aware that their common policy responses are not sufficient to tackle the new emerging policy problems. Especially for grand societal challenges, such as sustainable transport, coastal protection, and climate adaptation, often radical new, intertwined, and comprehensive policy strategies are necessary to tackle the complex policy issue.

In consequence, policy-making processes are started that deliberately aim to move beyond conventional wisdoms and policy paradigms, and thus have the desire to ‘think out-of-the-box’ and develop new values on which authoritative relations, policy goals, and solutions are grounded (Duijn, 2009: 129; Alink, 2006). These *deliberate* policy-making processes, where government has the desire to develop radical new policy strategies, are therefore considered

to be ‘innovative’ – or in the words of Kuhn ‘revolutionary’ – instead of being normal processes of policy-making.

Within the three empirical cases, the *deliberate* attempt to change the current state of affairs in terms of policy assumptions, convictions, goals, and strategies was definitely present. The Belgian transport domain, for example, had, from the early 1970s onwards, as in many other Western European countries, experienced a continued growth in demand (ICDO, 2000:70; FOD M&V, 2000:18). This increase was particularly met with a rapid expansion of road freight transport. In 1995, for example, more than 76% of the goods entering Belgium were transported across the mainland by trucks and lorries (Eurostat, 2014). Despite this substantial (and ‘economically’ beneficial) rise, the development also brought along various negative consequences that threatened the position of Belgium as transport hub, polluted the environment, and harmed the public health – the most important negative consequences being congested roads, the increase in greenhouse gas emissions, and the rise in the number of road accidents (ICDO, 2000:70-71).

Simultaneously, there were increased European and international pressures to green the domestic transport sectors (ICDO, 2000:70). Public officials soon realized that their *business-as-usual* policy strategies were no longer compatible with the renewed sectorial and political contexts (ICDO, 2000:71/437). As a result, the Federal Act on Sustainable Development of 1997 was established which, inter alia, urged the network members of the administrative network ‘to bolster a sustainable transition in the freight transport domain’. In the first case this 1997 federal Act formed the ‘mandate’ for the administrative network to deliberately search for new solutions to sustainable transport on Belgian territory.

Also in the second and third cases, policy documents spoke of a ‘deliberate goal of the administrative networks’ to change the way in which the Flemish government addressed problems of spatial planning and coastal protection. In the second case, for instance, the ‘bisconcept nota’ of 24 April 2015 urged the members of the administrative network to actively search for ‘dynamic and unconventional policy directions’ which would be able to deal with future challenges in the field of spatial planning (Vlaamse Regering, 2015: 2 and 6). In the third case, the ‘procesnota’ of 13 July 2016 encouraged the members of the administrative network to sit together and develop ‘novel’ integrated and intertwined policy solutions for future challenges regarding the protection of the coastal area by the year 2030 (Ruimte Vlaanderen, 2016).

To this end, I am of the opinion that a *deliberate* aim to change the existing policy solutions, goals, and assumptions was definitely present in the three empirical cases, and as such I speak of processes of policy innovation. Of course, some scholars have indicated that innovations in policy processes also happen by accident (see for instance Brown and Duguid, 1991). This does, however, not exclude that processes of innovation can be initiated and staged to produce innovative policy solutions. That being said, I do believe that in prospective studies scholars should better argue *when* exactly policy-makers have the desire and intention to develop new policy paradigms and thus innovate. Or, stated differently, a benchmark should be developed that makes it easier for analysts to distinguish ordinary processes of policy-making from processes of policy innovation, because in my view this is something that has not really been thought through by contemporary policy innovation scholars.

## **A future research agenda**

This dissertation has advanced our knowledge with regard to the micro-level management of collaborative processes of policy innovation. In addition, empirical evidence was given about the factors that influence learning activities in collaborative policy innovation networks. Moreover, the Exponential Random Graph Modelling methodology was introduced as a new methodological tool to make inferences about the interactive dynamics in these sorts of collaborative innovation processes. Nonetheless, there is still much work to be done in order to capture the management of collaborative processes of innovation in network settings. In this section, I elaborate on three future research avenues: theoretical integration of taxonomies of management roles, the development of a 'Diagnostic and Managerial Manual for Individual Behaviours and Cognitions', and new methodologies to study the generative mechanisms to describe *when* and *how* collaboration leads to innovation.

### **Theoretical integration of taxonomies of management roles**

In the collaborative innovation literature different perspectives on management tend to emphasize different management roles that are essential for facilitating collaborative processes of policy innovation. In this dissertation, several of these frameworks were used or mentioned. Specifically, the following taxonomies of management roles were used, developed, or identified: The Facilitative Leadership Model of Ansell and Gash (2012), the Network Management Triangle of Alexander Gaus (2014), the taxonomy of network roles of Agger and Sørensen (2016; Stevens and Agger, 2017), the four design attitudes of Bason (2014), the Innovative Leadership Model of Termeer and Nooteboom (2014), and the identified roles of a network manager as therapist (Stevens, 2017a) and ambassador (Stevens, 2017b).

Although these frameworks have their origins in different research fields (e.g. the model of Agger and Sørensen has its origins in the planning literature, whereas the network management triangle of Alexander Gaus was developed in the International Relations literature), there is a great deal of overlap between the frameworks with regard to the foreseen and expected tasks of the network manager to support collaborative processes of policy innovation. In my view, all of the earlier-mentioned management roles can be captured in four specific managerial tasks: stabilizing, (inter)personal management, motivating and catalysing, and external representation (*see figure 25*).

Stabilizing refers to the managerial activities that are related to the institutional design of the collaborative network. Basically, *stabilizing* entails setting strong groundwork from where the collaboration can unfold. This, amongst other things, includes activities such as setting the goal for collaboration or innovation, looking for resources to support the collaboration, the ways in which agreement will be reached (e.g. voting, majority rule, etc.), establishing certain ground rules for behaviour (such as fairness, confidentiality, openness, etc.), and developing initial process steps to avoid collaboration becoming a free-for-all.

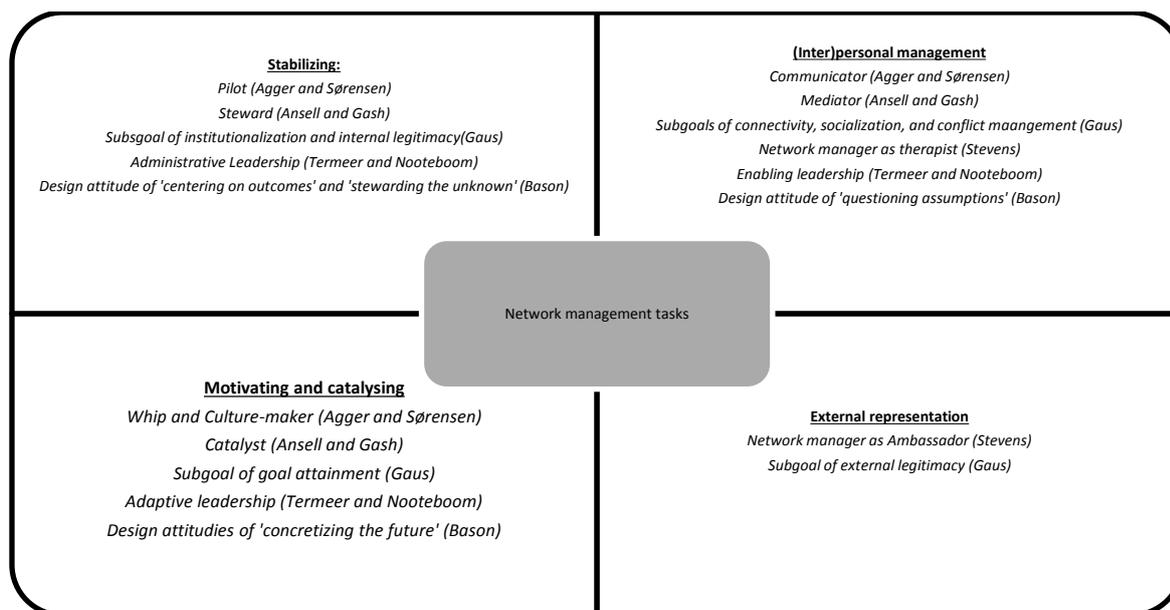


Figure 25: An overview of the integration of the network management tasks model.

(Inter)personal management focuses on the relationships between actors and the difficulty single network members can experience in their roles as organizational representatives. As such, this network management role relates to aspects of mediation, learning, storytelling, information-sharing, resource-sharing, trust building, and the management of discomforts. *Motivating and catalysing* are crucial to spur creativity in the collaborative innovation process. In particular, these activities are focused on ensuring that interactions between network members get an added value, in the sense that creative and out-of-the-box policies are designed and discussed. Lastly, external representation relates to aspects of diplomacy and communication to 'stakeholders' outside the collaborative arrangement. This can be keeping in touch with civil society organizations, private companies, or, as we have seen in the coastal protection cases, with municipalities or Ministers and cabinet members.

The value of one model of network management tasks is that this can stimulate knowledge accumulation in our research field. If scholars start to speak using the same concepts and terms, and use one framework to empirically analyse network dynamics, it will become easier to compare research findings, and build on earlier research findings. Besides that I thus hope that scholars stop the development of more taxonomies, and start speaking 'in one and the same scientific language', I advise them to devote more attention to the specific micro-level management activities that underlie these broad management roles and tasks. By better understanding these micro-level management strategies or interventions (in the sense of how and when to deploy them), our research field can really help practitioners in their quest to *innovate* in the public sector through collaborations.

I am therefore convinced that by agreeing on one network management tasks model – and subsequently using the roles/tasks of this model as coding categories for clustering micro-level management strategies (and their success) – more accumulative empirical research can be done, and scientific progress can be made in our research field regarding the management of collaborative policy innovation processes.

## **The development of a 'Diagnostic and Managerial Manual for Individual Behaviours and Collaborative Innovation Dynamics' for Network Managers**

A second future venue that I propose is inspired by the Diagnostic and Statistical Manual of Mental Disorders, better known as the DSM-V. This manual is published by the American Psychiatric Association, and covers all mental health disorders for both children and adults. Furthermore, the manual lists all known causes of these disorders, statistics in terms of gender, age at onset, and prognosis, as well as some research concerning the most optimal treatment approaches for these mental illnesses. Psychologists thus use the DSM-V when working with patients in order to better understand their mental illnesses, and to discover the right way to treat these patients. In addition, the DSM-V helps third-party players (such as direct family members, colleagues, or friends) to understand the needs of patients in their daily struggles concerning their anxieties, traumas, or stress situations they encounter daily. For many psychologists the manual is seen as 'the treatment bible' for making correct diagnoses and deciding on treatment plans.

In this dissertation we have seen that the 'individuals' in the collaborative policy innovation networks are the main players in these sorts of innovation processes. The individuals' behaviours, for example, determine how much impact each of the involved home-organizations have on the to-be-developed innovative policy solutions. Of course, a network manager of collaborative innovation processes must oversee the dynamics at the *network*, *organizational*, and *individual* levels, to avoid that an innovation is not developed. Nevertheless, all of these levels come together in the behaviour of one single person, i.e. the behaviour of each *individual* who represents his or her *organization* in the collaborative *network*.

For each of these levels of management (i.e. network, organizational and individual levels), the empirical studies of this dissertation offer a list of challenges that a network manager has to deal with. For example, the ERGM study revealed that a network manager has a network view on the following questions: Which actors reach the most other actors (issue of centrality)? Can every actor be reached by every other actor (issue of connectivity)? How many actors are reached by any actor on average (issue of network size)? Do some actors only interact with one another (issue of cliques)? Do some sets of actors interact only with some other sets of actors (issues of blocs)?

Apart from these structural issues of interaction, a manager can discern from a network view whether actors with overlapping network interactions have overlapping knowledge structures, shared values, or just equivalent behavioural patterns. He or she can also perceive whether communications between actors flow only in one direction, or also in a dyadic manner. Ultimately, the challenge of the network manager at the 'network level' is to bring all actors in a network position that provides for the least behavioural constraint, and gives them access to most of the information flows.

With regard to the organizational level, the manager has to consider the expectations, policy interests, and perceptions of the different organizations that are involved in the collaborative policy innovation process (Friedberg and Crozier, 1980). Of course, each organization sends a representative to the inter-organizational arrangement. However, many of the

representatives have the reflex to mainly consider what their senior administrative leaders, cabinet members or Minister would think about a certain subject matter.

In policy situations where there are multi-causal, multi-sectorial, and sometimes even multi-level explanations for a policy problem, the network manager has to be even more aware that contrasting perceptions of network members can lead to deadlocks in the policy innovation process (Koppenjan and Klijn, 2004: 120). To this end, to avoid stagnation the challenge for the network manager is to see to it that these diverging problem perceptions and differences in organizational interests do not lead to cognitive fixations, knowledge conflicts, asymmetric policy debates, or even the withdrawal of an organization from the innovation process (idem: 123).

The 'individual' level is perhaps the most interesting. In managing the 'individual', the network manager has to take care of two different aspects. The first aspect is the type of strategy that the individual chooses in the network interactions on the basis of the content of the policy problem, his or her organizational interests, the course of the interaction process, and the strategies and positions of the other parties in the arrangement (Koppenjan and Klijn, 2004: 49). Actor strategies are not necessarily cooperative. In the empirical cases we saw that it was attractive for some representatives to slow down or block the innovation process. Some actors were even not really interested in the innovation process. Again others were dependent on an actor's resources or approval, and therefore behaved more 'cooperatively'.

Hence, apart from cooperative actor strategies, individuals can opt for several other actor strategies, such as a 'go-it-alone' strategy, conflictual strategies, avoidance strategies, or facilitating strategies (i.e. the actor acts as a kind of network manager by bringing parties together, mediating in conflicts, and so forth). These strategies can change along the way, just like actors' perceptions can change. To this end, the network manager's first job at the individual level is to understand the motives and strategies of the single network members, and influence these individual actor strategies if they hinder the development of a policy innovation.

The second aspect at the individual level has to do with a representative's personal ideas and convictions. These can be different from the interests and ideas of his or her organization, senior leaders, cabinet members, and Minister. Each civil servant will through experience have developed their own frames (i.e. implicit theories) about certain problem situations. These frames are often rigid and hard to change, as they have gone through an intense process of naming and framing (Rein and Schön, 1996). If the personal frames of representatives on certain aspects do not align with their organizational interests or goals, a representative can experience a great deal of discomfort in articulating the 'opinion of the organization' in a collaborative innovation network, or feel alienated (Tummers, 2011). At the same time, a divergent opinion or view of an organizational representative can create leeway in the collaborative arrangement more easily to find common ground for innovation between the different goals and interests of network members and their organizations. Therefore it is important that the network manager, as for example 'therapist', supports each individual actor, where needed, to make a representative feel more comfortable with his or her role.

These challenges at the ‘different levels’ of the collaborative policy innovation process do not occur one at a time. Instead, many of these managerial challenges are interrelated and occur simultaneously. In addition, the challenges and required solutions can contradict each other, which suggests that a network manager has to balance certain trade-offs in his or her management activities. This makes the management of collaborative processes of policy innovation an utterly complex endeavour.

We have seen in this dissertation that much scholarly effort is currently being put into listing numerous management instruments and strategies which are utilized for solving specific managerial challenges. This is also something that I have done in many of my empirical cases. Other scholars developed taxonomies of broad management roles, suggesting how managers can best behave to facilitate collaborative processes of innovation. I believe it is time that we (‘as scholars’) take a step to the next level and aim to develop – in line with the DSM-V – a manual that helps practitioners to choose the right management instrument for a specific managerial situation.

This manual should, amongst other things, list all sorts of individual actor behaviours and complex collaborative innovation dynamics that a network manager can encounter in his or her facilitative role during the collaborative policy innovation process. In addition, examples should be given of how in empirical cases, as a consequence of specific network manager interventions, individuals’ perceptions, actor strategies, and relations between actors in the constellation changed. Such a manual – which might be called ‘the Diagnostic and Managerial Manual for Individual Behaviours and Collaborative Innovation Dynamics (the DMMIC)’ – can, in this way, help practitioners (who take on the role of network managers) to determine, in complex managerial situations in which they have little idea how to cure or tame the situation, which specific management instrument they can pick to spur dialogue, learning, and socialization in the collaborative innovation arrangement.

### **New methodologies to examine more closely the interrelatedness of the generative mechanisms of collaborative policy innovation processes**

A third, and final, future avenue proposal has to do with research on the generative mechanisms of collaborative policy innovation processes. More specifically, it deals with the question of *when* collaboration leads to innovation. As mentioned earlier, in the literature the distinction is made between the generative mechanisms of synergy, learning, and commitment. Here synergy is understood as the process whereby stakeholders bring together complementary resources or capabilities in such a way that they are empowered to undertake innovative projects (Ansell and Torfing, 2014: 11). Learning is the process whereby cognitive change occurs as a result of interaction with other stakeholders, which can transform or reframe the collective sense of possibility or generative new ideas (idem: 11). Commitment is the process through which groups build consensus and support for a particular innovative policy solution. For some the latter generative mechanisms can also be understood as trust building (idem: 11-12).

Several scholars (Ansell and Torfing, 2014: 238-239; Stevens and Verhoest, 2016b) have argued that more attention should be devoted to the dynamics of these generative mechanisms, “in order to fully understand how different forms of collaboration can stimulate and strengthen different parts and aspects of the innovation process.” In this dissertation,

much focus has been on learning activities between members of networks. For this the Exponential Random Graph Modelling methodology was used. This is a relatively new methodology that allows for making inferences about network dynamics, such as learning manifestations, resource-sharing processes, or trust-building activities (see Stevens and Verhoest, 2016b). Other scholars who looked at the generative mechanisms of collaborative processes of innovation mainly used the traditional case study methodology (Termeer and Nootboom, 2014; Agger and Sørensen, 2014; Bason, 2014; Gray and Ren, 2014).

The case study methodology definitely has its value for research; case studies can analyse in depth how learning, resource-sharing, or trust building can enhance participation and creativity in collaborative innovation processes. However, to better understand the dynamics of these generative processes, I further plead for the use of other and new methodologies (just like I have done with the ERGM methodology). Experiments can, for example, help to assess under what circumstances network members will share resources and information, or under what conditions trust will be fostered between two persons. The Q-sort methodology can assess actors' perceptions of how learning, trust building, and resource-sharing contribute to collaboration processes, or aspects of identity formation and idea generation.

The qualitative comparative analysis (QCA) methodology can be used to examine the impact of an organization's culture on the way its representatives collaborate with other network members in innovation processes regarding aspects of learning, synergy, and commitment. The Event Sequence Analysis, as Wouter Spekkink (2015) used in his dissertation, is another research approach that offers a set of techniques for the systematic longitudinal investigation of process phenomena such as learning, resource-sharing, and trust building. The use of different methodologies can enrich our research field, as these look at different aspects of collaboration and innovation. Hence, I encourage scholars in prospective studies to add new equipment to our methodological toolbox for studying the generative mechanisms in collaborative processes of innovation – to allow the generation of new insights regarding how collaboration eventually leads to innovation.

## **Practical implications**

This dissertation has tried to contribute to the scientific community by opening up the blackbox of management, collaboration, and policy innovation. The research findings do also have some implications for practitioners who take on the role as network managers for the promotion of policy innovations in collaborative networks. Although the notion of network management is now more prevalent than in the past, it is not particularly new. In fact, aspects of collaborative innovation, and the management of these collaborative processes, build on a rich tradition of research in political science, organizational science, and public administration, as many researchers have worked on concepts and ideas of interdependency, collaboration, horizontal coordination, and network management in these research fields (Klijn and Koppenjan, 2016: 10).

In essence, the management of collaborative processes of innovation is in itself not very different from the management dynamics of network processes with other aims. However, what stood out in the empirical cases was that the ambition for developing a radically new, not-yet-known policy strategy – which moves beyond conventional wisdom and

organizational practices – does give an extra and unique dimension to the management of collaborative networks, in the sense that managers must also carefully treat the discomforts and insecurities that network members experience in respect of the ambitious tasks and results that are given to, and expected from, them.

To elucidate, in all empirical studies it became clear that, from the start of the innovation process, involved actors had a great deal of uncertainty with regard to the expected or possible outcomes of the innovation process. In point of fact, the only certainty the network members had upfront was that the eventual agreement had to act as a game-changer, and radically alter the way in which the involved departments would address the policy problem, and operate, relate to, and interact with each other (Stevens and Verhoest, 2016a:21). In consequence, the first reflex of many representatives was to see how the creative, out-of-the-box, discussed ideas aligned with their organizational interests, as well as to make sure that the main tasks and competences of their organization would not be an issue of discussion after the design phase of the innovation process.

Furthermore, quite a lot of managerial activity was dedicated to the nurturing of the discomforts network members experienced regarding the pressure they faced to perform well for their home-organization, but, at the same time, to developing radically new policy solutions for complex and intertwined policy problems. This uncertain dynamics with regard to the expected performance of the network arrangement does demand particular skills from a network manager who facilitates the collaborative innovation process. Hence, I advise government officials to nominate or select 'network managers' on the basis of specific competencies and skills they possess.

In particular, from the empirical cases it becomes clear that network managers of collaborative processes of policy innovation require four types of competencies to optimally facilitate such processes. First of all, due to the uncertainty at the beginning of the collaborative policy innovation process, in terms of what should be designed and how the process will evolve, the network manager must be steadfast and resolute in determining an initial course that allows the constituent parts of the network (i.e. the involved home-organizations and representatives) to form a foundation from where the innovation process can unfold.

Second, the network managers must be capable of dealing with shifting patterns of relationships between network members in the collaborative network. In the empirical cases we saw that shifting patterns can be a consequence of experiencing learning interactions or power conflicts. Therefore, it is necessary that the network manager possesses the skill of diplomacy to foresee potential conflicts of interest, or to catalyse the innovation processes when opportunities arise. Moreover, network managers must have a high tolerance for ambiguity and uncertainty, considering the fact that the precise nature of interactions and sorts of relationships between network members can be very ambivalent. In addition, the network manager must sometimes be prepared to stand back to detect patterns and meaning in what often appears to be a messy and unstructured set of relationships.

Third, network managers need to abandon linear ways of working. The empirical cases prove that linear working methods, starting from problem definitions to finding comprehensive

policy responses for wicked issues, are too simplistic for collaborative innovation processes. In fact, managing a collaborative policy innovation network requires the acknowledgement that the design cycle can be very fuzzy. Only when an agreement has been reached, more stable patterns of interaction are likely to emerge. However, in the design phase of the empirical cases network members worked from conflict to conflict, gained new insights, adapted their policy positions, engaged in visionary processes to think about how the policy situation might look by the year 2030, etc. These interactions caused the architecture of the collaborative network to be reconfigured, and network members to 'reinvent' themselves. As such, linear thinking by network members would only delay processes of collaborative policy innovation.

How, then, should network managers deal with surprises and changes in collaborative processes of innovation? Scholars such as Jackson and Stainsby (2000: 14) often use the metaphor of the 'controlled burn' to answer this specific question, i.e. the process used by foresters to clear deadwood and thereby prevent uncontrollable wildfires that would destroy the whole forest. By analogy, network managers of collaborative processes of policy innovation will need to continuously prune their collaborative networks to ensure that uncontrollable network developments do not lead to unmanageable situations which cause the collaboration to go astray.

Fourth, to spur learning activities in the collaborative policy innovation network, network managers have to be able to deal with issues of power in the collaborative networks. From the ERGM paper it became clear that collaborative networks are often constellations of centres of power. Network managers will have to manage through these power centres to develop a level playing field for all network members. Specifically, to foster socializations between network alters, the network manager has to see to it that information located in each power centre is made available to the network as a whole. 'Knowledge managers' are thus those who are able to see new relationships (i.e. new insights and knowledge) between the information bits scattered throughout the network. Network managers will need to negotiate information out of power centres, and encourage information-sharing for the benefit of the whole network in terms of learning and knowledge creation. This will help network members to be more 'creative' or 'innovative', as they will have access to more information and data.

Of course, other competencies are also essential for managing a collaborative network (e.g. listening, influencing, visioning, creating commitment among network partners, etc.). However, I believe that specifically these four skills (i.e. being steadfast, the skill of diplomacy, abandoning linear ways of working, and being able to work with power relations) are most necessary for picking the 'right' network manager for a collaborative policy innovation process. These four skills can thus help government officials to look for the right person-fit with the network manager's role, instead of blindly throwing darts at the board when making decisions about promotions into network management posts. Moreover, individuals who aspire to become network managers of processes of policy innovation are advised to gain more experience in these skills by, for example, following managerial courses or job-shadowing experienced network managers in their facilitating management activities for collaborative policy innovation processes.

## **Concluding the conclusions**

To conclude, this dissertation started with the metaphor of managing the Ostrich's dance. The metaphor was used to indicate the challenge for managers of collaborative policy innovation networks to prevent network members 'putting their heads in the ground' and instead 'dancing together' in the search for a collaborative advantage in terms of innovative and comprehensive policy solutions. In this dissertation, the focus has been on the value of collaborations as vehicles for the promotion of policy innovations, as well as on how management can safeguard the development of innovative policy solutions in collaborative networks. In the coming years, I expect that the use of collaborative networks for developing innovative policy plans will only increase, due to the great societal challenges that lie ahead of us. International pressures, such as the Paris Climate Agreements as well as the UN Sustainable Development Goals, will further urge governments to take bold and transformative steps which are urgently needed to shift the world onto a sustainable and resilient path.

The last four years were a great experience for me to gain a better understanding of how network management of collaborative networks within governments can contribute to the design of innovative and intertwined policy plans. It is my personal goal to use this knowledge in my future work activities as 'one of the many ostriches in world' who will try to leave a better world for our children. For now, I hope that this dissertation inspired scientists and practitioners to look for new ways to spur creativity and innovation in the design of policies in the public sector.

## References

- Aagaard, P. (2010). *New Ways in Public Innovation; the promises and facts of emergent strategic management in public administration*. Working Paper Series: Studies in Collaborative Innovation, ISSN 1904-3619.
- Agger, A. & Sørensen, E. (2014). Designing collaborative policy innovation: lessons from a Danish municipality. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 188-209). New York, N.Y.: Routledge.
- Agger, A. & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*, doi: 10.1177/1473095216672500.
- Agranoff, R. (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, 66(special issue), 56-65.
- Agranoff, R., and McGuire, M. (2003). *Collaborative Public Management: New Strategies for Local Government*. Washington, DC: Georgetown University Press.
- Alink, F.B. (2006). *Crisis als kans? Over de relatie tussen crisis en hervormingen in het Vreemdelingenbeleid van Nederland en Duitsland*. Doctoral thesis Utrecht University.
- Aldrich, H. E. (1979). *Organizations and Environments*. Stanford, CA: Stanford University Press
- Alexander, D., Lewis, J. M., & Considine, M. (2011). How politicians and bureaucrats network: a comparison across governments. *Public Administration*, 89(4), 1274-1292.
- Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571.
- Ansell, C., & Gash, A. (2012). Stewards, mediators and catalysts: Toward a Model of Collaborative Leadership. *Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-21.
- Ansell, C., & Torfing, J. (2014). Collaboration and design: new tools for public innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 1-19). New York, N.Y.: Routledge.
- Ansell, C. & Torfing, J. (2014). *Public Innovation through Collaboration and Design*. New York, N.Y.: Routledge
- Argyris, C. (1977). Double loop learning in organizations. *Harvard Business Review*, 55(5), 115-125.

- Armstrong, S. J., Cools, E., & Sadler-Smith, E. (2012). Role of cognitive styles in business and management: Reviewing 40 years of research. *International Journal of Management Reviews*, 14(3), 238-262.
- Austin, J. E., & Seitanidi, M. M. (2012a). Collaborative value creation: A review of partnering between nonprofits and businesses: Part I. Value creation spectrum and collaboration stages. *Nonprofit and Voluntary Sector Quarterly*, 41(5), 726-758.
- Austin, J. E., & Seitanidi, M. M. (2012b). Collaborative value creation: A review of partnering between nonprofits and businesses. Part 2: Partnership processes and outcomes. *Nonprofit and Voluntary Sector Quarterly*, 41(6), 929-968.
- Bardach, E. (1998). *Getting agencies to work together: The practice and theory of managerial craftsmanship*. Washington, DC: Brookings Institution Press.
- Barrett, F. J. (1998). Coda—creativity and improvisation in jazz and organizations: Implications for organizational learning. *Organization science*, 9(5), 605-622.
- Bason, C. (2014). Design attitude as an innovation catalyst. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 209-229). New York, N.Y.: Routledge.
- Bekkers, V. J. J. M., Edelenbos, J., & Steijn, B. (2011). *Innovation in the public sector*. IIAS Series: Governance and Public Management. Basingstoke, United Kingdom: Palgrave Macmillan.
- Bekkers, V.J.J.M., Tummers, L.G., Stuijzand, B.G. & Voorberg, W. (2013). *Social Innovation in the Public Sector: An integrative framework*. LIPSE Working papers (no. 1).
- Boeije, H.R. (2009). *Analysis in Qualitative Research*. Thousand Oaks, CA: Sage Publications.
- Borgatti, S. P., Mehra, A., Brass, D. J., & Labianca, G. (2009). Network analysis in the social sciences. *Science*, 323(5916), 892-895.
- Borins, S. (2008). *Innovations in Government – Research, Recognition and Reputation*. Washington, D.C. : Brookings Institution Press.
- Börzel, T. A., & Risse, T. (2010). Governance without a state: Can it work?. *Regulation & Governance*, 4(2), 113-134.
- Bressers, N. (2014). The impact of collaboration on innovative projects: a study of Dutch water management. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 89-106). New York, N.Y.: Routledge.
- Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science*, 2(1), 40-57.

Bryson, J. M., Crosby, B. C. & Stone, M. M. (2006), The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature. *Public Administration Review*, 66(1), 44–55.

Burke, C. (1979). *Innovation and Public Policy: The Case of the Personal Rapid Transit*. Lexington, MA: Heath and Co.

Carstensen, H. V. & Bason, C. (2012). Powering collaborative policy innovation: can innovation labs help. *The Innovation Journal: The Public Sector Innovation Journal*, 17(1), 1-26.

Castells, M. (1996). *The Network Society*. Oxford, United Kingdom: Blackwell.

Considine, M., Lewis, J. M., & Alexander, D. (2009). *Networks, innovation and public policy: Politicians, bureaucrats and the pathways to change inside government*. Basingstoke, United Kingdom: Palgrave Macmillan.

Cools, E., & Van den Broeck, H. (2007). Development and validation of the Cognitive Style Indicator. *The Journal of Psychology*, 141(4), 359-387.

Cools, E., Van den Broeck, H. & Evans, C. (2008). Cognitive Styles and Managerial Behaviour: a Qualitative Study. *Education + Training*, 50(2): 103–114.

Daft, R. L. (1978). A dual-core model of organizational innovation. *Academy of Management Journal*, 21(2), 193-210.

Cranmer, S.J., Desmarais, B.A., & Menninga, E.J. (2012). Complex Dependencies in the Alliance Network. *Conflict Management and Peace Studies*, 23(3), 279-313.

Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of Management Studies*, 38(1), 45-65.

Damanpour, F., Walker, R. M., & Avellaneda, C.N. (2009). Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. *Journal of Management Studies*, 46(4), 650-675.

De Vries, H., Tummers, L. & Bekkers, V. (2014). Innovation in the public sector: A systematic review and future research agenda. *Public Administration*, 94(1), 146-166.

Dommett, K. & Skelcher, C. (2014). Opening the Black Box of Administrative Reform: A Strategic- Relational Analysis of Agency Responses to Termination Threats. *International Public Management Journal*, 17(4): 540-563.

Downs, A. (1967). *Inside Bureaucracy*. Boston, MA: Little, Brown and Company.

Du Gay, P. (2000). *In praise of bureaucracy: Weber-organization-ethics*. London, United Kingdom: Sage Publications.

- Du Gay, P., & Lopdrup-Hjorth, T. (2016). Fear of the formal. *European Journal of Cultural and Political Sociology*, 3(1), 6-40.
- Duijn, M. (2009). *Embedded Reflection on Public Policy Innovation; a relativist/pragmatist inquiry into the practice of innovation and knowledge transfer in the WaterINNOvation program*. Dissertation published by Eburon.
- Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. *The Journal of Marketing* 51(2), 11-27.
- Edquist, C., Hommen, L., & McKelvey, M.D. (2001). *Innovation and employment: Process versus product innovation*. Cheltenham, United Kingdom: Edward Elgar.
- Ericsson, K. A., & Simon, H. A. (1980). Verbal reports as data. *Psychological Review*, 87(3), 215.
- Feldman, M. S., & March, J. G. (1981). Information in organizations as signal and symbol. *Administrative Science Quarterly*, 171-186.
- Fischhoff, B., & MacGregor, D. (1982). Subjective confidence in forecasts. *Journal of Forecasting*, 1(2), 155-172.
- Flyvbjerg, B. (2011). Case study. This is a chapter. In N.K. Denzin, N. K. & Y.S. Lincoln (Eds.). *The Sage Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.
- FOD M&V. (2000). *Plenaire vergadering dinsdag 17 oktober 2000, Namiddagvergadering, Handelingen*. Accessed March 8, 2016 at: <http://tinyurl.com/hgkgiba>.
- Friedberg, E., & Crozier, M. (1980). *Actors and systems: The politics of collective action*. Chicago, IL: University of Chicago Press.
- Gaus, A. (2014). *A conceptual framework of (trans governmental) network management*. Paper presented at the 2<sup>nd</sup> WIPCAD Conference. Potsdam, Germany, December 4-6.
- George, A. L. & Bennett, A. (2005). *Case studies and theory development in the Social Sciences*. Cambridge, MA: MIT Press.
- Goodreau, S.M. (2007). Advances in exponential random graph ( $p^*$ ) models applied to a large social network. *Social Networks*, 29(1), 231-248.
- Gray, B. & Ren, H. (2014). The importance of joint schemas and brokers in promoting collaboration for innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 125-148). New York, N.Y.: Routledge.
- Gulick, L. & Urwick, L. (1937). *Papers on the Science of Administration*. New York: Augustus M. Kelley.

Hall, P. (1993). Policy paradigms, social learning and the state: The case of economic policymaking in Britain. *Comparative Politics*, 25(3), 275-296.

Handcock, M. S., Hunter, D. S., Butts, C.T., Goodreau, S.M., Krivitsky, P.N., Morris, M., Wang, L., Li, K. & Bender-de Moll, S. (2015). *Fit, Simulate and Diagnose Exponential-Family Models for Networks*. The Comprehensive R Archive Network. Accessed February 26, 2016 at: <https://cran.r-project.org/web/packages/ergm/ergm.pdf>

Hanf, K., and Scharpf, F. W. (1978). *Interorganizational policy making: limits to coordination and central control*. Thousand Oaks, CA: Sage Publications.

Harris, J. K. (2014). *An Introduction to Exponential Random Graph Modelling*. London, United Kingdom: Sage Publications.

Hartley, J. (2005). Innovation in governance and public services: Past and present. *Public Money and Management*, 25(1), 27-34.

Hay, C. (2002). *Political Analysis: A Critical Introduction*. Basingstoke, United Kingdom: Palgrave Macmillan.

Hodgkinson, G. P., & Sadler-Smith, E. (2003). Reflections on reflections... on the nature of intuition, analysis and the construct validity of the Cognitive Style Index. *Journal of Occupational and Organizational Psychology*, 76(2), 279-281.

Hood, C. (1991). A public management for all seasons?. *Public administration*, 69(1), 3-19.

Huber, G. P., & Power, D. J. (1985). Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy. *Strategic Management Journal*, 6(2), 171-180.

Huxham, C., & Vangen, S. (2013). *Managing to collaborate: The theory and practice of collaborative advantage*. New York, N.Y.: Routledge.

ICDO. (2000). *Rapporten 2000 van de leden van de Interdepartementale Commissie Duurzame Ontwikkeling*. Accessed March 8, 2016 at: <http://tinyurl.com/jkrct6s>.

Iyer, K.N.S. (2002). Learning in Strategic Alliances: An Evolutionary Perspective. *Academy of Marketing Science Review*. Retrieved from: <https://search.proquest.com/docview/200897895?accountid=13598>.

Jackson, P. M., & Stainsby, L. (2000). The public manager in 2010: Managing public sector networked organizations. *Public Money and Management*, 20(1), 11-16.

James, O., & Lodge, M. (2003). The limitations of 'policy transfer' and 'lesson drawing' for public policy research. *Political Studies Review*, 1(2), 179-193.

Jessop, B. (2001). Institutional re (turns) and the strategic-relational approach. *Environment and Planning A*, 33(7), 1213-1236.

Kanter, R. M. (1994). Collaborative advantage. *Harvard Business Review*, 72(4), 96-108.

Keast, R.L. & Mandell, M. (2014). The collaborative push: moving beyond rhetoric and gaining evidence. *Journal of Management and Governance*, 18(1), 9-28.

Keast, R. & Waterhouse, J. (2014). Collaborative networks and innovation: the negotiation-management nexus. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 148-170). New York, N.Y.: Routledge.

Kirton, M. J., & de Ciantis, S. M. (1994). Cognitive style in organizational climate. This is a chapter. In M. J. Kirton (Eds.). *Adaptors and innovators: styles of creativity and problem solving* (pp. 72–90). New York, N.Y.: Routledge.

Klijin, E. H. (1996). Analysing and managing policy processes in complex networks: A theoretical examination of the concept policy network and its problems. *Administration & Society*, 28(1), 90-119.

Klijin, E. H., & Koppenjan, J. F. M. (2016). *Governance in Networks in the Public Sector*. New York, N.Y.: Routledge.

Knockaert, M., Der Foo, M., Erikson, T. & Cools, E. (2015). Growth Intentions among Research Scientists: A Cognitive Style Perspective. *Technovation*, 38(1): 64–74.

Knoke, D., & Yang, S. (2008). *Social network analysis (Quantitative applications in the social sciences)*. Los Angeles, CA: Sage Publications.

Koppenjan, J. F. M., and E.H. Klijin. (2004). *Managing uncertainties in networks: a network approach to problem solving and decision making*. Psychology Press.

Kraemer, K. L., Andersen, K. V., & Perry, J. L. (1994). Information technology and transitions in the public service: A comparison of Scandinavia and the United States. *International Journal of Public Administration*, 17(10), 1871-1905.

Kuhn, T. S. (1962). *The Structure of Scientific Revolutions*. Chicago, IL: University of Chicago Press.

Leifer, R., & Delbecq, A. (1978). Organizational/environmental interchange: A model of boundary spanning activity. *Academy of Management Review*, 3(1), 40-50.

Lloyd-Reason, L., Muller, K., & Wall, S. (2002). Innovation and education policy in SMEs: a Czech perspective. *Education and Training*, 44(8), 378-387.

Leybourne, S. A. (2007). Improvisation within management: oxymoron, paradox, or legitimate way of achieving? *International Journal of Management Concepts and Philosophy*, 2(3), 224-239.

MacKenzie, K.D. (1986). Virtual positions and power. *Management Science*, 32(1), 622–642.

March, J.G. & Simon, H.A. (1958). *Organizations*, New York, N.Y.: Wiley.

Milward, H. B., and Provan, K. G. (2006). A Manager's Guide to Choosing and Using Collaborative Networks. Retrieved from the IBM Center for the Business of Government website: [http://www.srpc.ca/ess2016/summit/Reference\\_9-Milner.pdf](http://www.srpc.ca/ess2016/summit/Reference_9-Milner.pdf).

Montin, S., Johansson, M. & Forsemalm, J. (2014). Understanding innovative regional collaboration: metagovernance and boundary objects as mechanisms. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 106-125). New York, N.Y.: Routledge.

Moore, M. H. (1995). *Creating public value: Strategic management in government*. Cambridge, MA: Harvard University Press.

Nambisan, S. (2008). Transforming Government through Collaborative Innovation. [<http://www.flbenchmark.org/vertical/Sites/%7B101652CD-38DF-4EBF-A75F-D340327A2266%7D/uploads/%7B617F2C4E-F339-4BA5-A09D-C41FC71D4D9E%7D.PDF>].

Meeus, M. T. H., & Edquist, C. (2006). Introduction to Part I: Product and process innovation. This is a chapter. In Hage, J. and M. Meeus (Eds.). *Innovation, Science, and Institutional Change* (pp. 23-37). Oxford, United Kingdom: Oxford University Press.

Moore, M. & Hartley, J. (2008). Innovations in Governance. *Public Management Review*, 10(1), 3-20.

Ney, S. (2009). *Resolving Messy Policy Problems; handling conflict in environmental, transport, health, and ageing policy*. London, United Kingdom: Earthscan.

OECD. (2014). *Innovating the Public Sector; From Ideas to Impact*. Paper presented at the OECD Conference, Paris, France, November 12-13.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review*, 16(1), 145-179.

O'Reilly, C. A. (1978). The intentional distortion of information in organizational communication: A laboratory and field investigation. *Human Relations*, 31(2), 173-193.

Osborne, D. & Gaebler, T. (1992). *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. Reading, MA: Addison-Wesley.

Piaget, J. (1976). *Piaget's theory* (pp. 11-23). Springer Berlin Heidelberg.

Pina e Cunha, M., Vieira da Cunha, J., & Kamoche, K. (1999). Organizational improvisation: What, when, how and why. *International Journal of Management Reviews*, 1(3), 299-341.

- Rein, M., & Schön, D. (1996). Frame-critical policy analysis and frame-reflective policy practice. *Knowledge and Policy*, 9(1), 85-104.
- Rhodes, R. A. W. (1996). The new governance: governing without government. *Political Studies*, 44(4), 652-667.
- Rittel, H. W., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155-169.
- Rowley, T. J. (1997). Moving beyond dyadic ties: A network theory of stakeholder influences. *Academy of Management Review*, 22(4), 887-910.
- Ruimte Vlaanderen. *Procesnota*. Territoriaal Ontwikkelingsprogramma Kustzone.
- Sadler-Smith, E., & Badger, B. (1998). The HR practitioner's perspective on continuing professional development. *Human Resource Management Journal*, 8(4), 66-75.
- Scharpf, F.W. (1978). Interorganizational Policy Studies: Issues, Concepts and Perspectives. This is a chapter. In Hanf, K.I. and F.W. Scharpf (eds.), *Inter-organizational policy making: limits to coordination and central control* (pp. 345-370), Thousand Oaks, CA: Sage Publications.
- Scharpf, F. W. (1994). Games real actors could play: positive and negative coordination in embedded negotiations. *Journal of Theoretical Politics*, 6(1), 27-53.
- Sehested, K. (2009). Urban planners as network managers and metagovernors. *Planning Theory & Practice*, 10(2), 245-263.
- Schultz Larsen, T. (2014). The Ambivalent Relations Between Bureaucracy and Public Innovation: The Case of the Successful Failure of Dial Police. *International Journal of Public Administration*, doi:10.1080/01900692.2014.930751.
- Sørensen, E., & Torfing, J. (2009). Making governance networks effective and democratic through metagovernance. *Public administration*, 87(2), 234-258.
- Sørensen, E. & J. Torfing. (2010). Collaborative Innovation in the Public Sector: an analytical framework. Working Paper Series: Studies in Collaborative Innovation, ISSN 1904-3619.
- Sørensen, E., & Torfing, J. (2011). Enhancing collaborative innovation in the public sector. *Administration and Society*, 43(8), 842-868.
- Sørensen, E., & Torfing, J. (2012). Collaborative Innovation in the Public Sector. *The Innovation Journal: The Public Sector Innovation Journal*, 17(1): 1-14.
- Sørensen, E. (2014). *The Metagovernance of Public Innovation in Governance Networks*. Paper presented at the Policy & Politics Conference, Bristol, UK, September 16-17.

Sørensen, E. & Waldorff, S.B. (2014). Collaborative policy innovation: Problems and potential. *The Innovation Journal: The Public Sector Innovation Journal*, 19(3), 1-17.

Sørensen, E. (2016). Political innovations: innovations in political institutions, processes and outputs. *Public Management Review*, 19(1), 1-19.

Spekkink, W. (2015). Building capacity for sustainable regional industrial systems: an event sequence analysis of developments in the Sloe Area and Canal Zone. *Journal of Cleaner Production*, 98(1), 133-144.

Stevens, V., & Verhoest, K. (2016a). How to Metagovern Collaborative Networks for the Promotion of Policy Innovations in a Dualistic Federal System?. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-26.

Stevens, V. & Verhoest, K. (2016b). A Next Step in Collaborative Policy Innovation Research: Analysing Interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2): 1-20.

Stevens, V., & Agger, A. (2017). Managing Collaborative Innovation Networks – Practical Lessons from a Belgian Spatial Planning Initiative. *Journal of Public Administration and Governance*, 7(3), 154-173.

Stevens, V. (2017a). Discussion: The Network Manager as Therapist. *Journal of Public Administration and Governance*, 7(3), 118-122.

Stevens, V. (2017b). How to Manage Collaborative Policy Innovation Networks? Practical Lessons from a Flemish Coastal Protection Initiative. *Journal of Public Administration and Governance*, 7(4), 94-116.

Stevens, V. (2018, forthcoming). Individual learning behaviour in collaborative networks. This is a chapter. In Dunlop, C., C. Radaelli, and P. Trein, *Learning in Public Policy: Analysis, Modes and Outcomes*. Basingstoke, United Kingdom: Palgrave-MacMillan.

Termeer, C. & Nooteboom, S. (2014). Innovative leadership through networks. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 170-188). New York, N.Y.: Routledge.

Teisman, G. R. (2000). Models for research into decision-making processes: on phases, streams and decision-making rounds. *Public Administration*, 78(4), 937-956.

Torfing, J. (2013). Collaborative innovation in the public sector. This is a chapter. In Osborne, S.P (Eds.) and L. Brown. *Handbook of Innovation in Public Services* (pp. 301-316). Cheltenham, UK: Edward Elgar Publishing.

Torfing, J. (2017). *Collaborative Innovation in the Public Sector*. Wahsington, D.C: Georgetown University Press.

- Tummers, L. (2011). Explaining the willingness of public professionals to implement new policies: A policy alienation framework. *International Review of Administrative Sciences*, 77(3), 555-581.
- Van Buuren, A., & Loorbach, D. (2009). Policy innovation in isolation? Conditions for policy renewal by transition arenas and pilot projects. *Public Management Review*, 11(3), 375-392.
- Van Popering-Verkerk, J., & Van Buuren, A. (2016). Decision-Making Patterns in Multilevel Governance: The contribution of informal and procedural interactions to significant multilevel decisions. *Public Management Review*, 18(7), 951-971.
- Verkerk, J., Teisman, G., & Van Buuren, A. (2015). Synchronising climate adaptation processes in a multilevel governance setting: exploring synchronisation of governance levels in the Dutch Delta. *Policy & Politics*, 43(4), 579-596.
- Vinke-de Kruijf, J., Bressers, H., & Augustijn, D.C.M. (2014). How social learning influences further collaboration: experiences from an international collaborative water project. *Ecology and Society*, 19(2): 40-61.
- Vlaamse Regering. *Bisconceptnota Beleidsplan Ruimte Vlaanderen*. VR20152404 DOC.0343/1BIS
- Voets, J., Verhoest, K., & Molenveld, A. (2015). Coordinating for Integrated Youth Care: The need for smart metagovernance. *Public Management Review*, 17(7), 981-1001.
- Volkema, R. J., & Gorman, R. H. (1998). The influence of cognitive-based group composition on decision-making process and outcome. *Journal of Management Studies*, 35(1), 105–121.
- Waldorff, S.B., Kristensen, L.S. & Ebbesen, B.V. (2014). The complexity of governance: challenges for public sector innovation. This is a chapter. In C. Ansell & J. Torfing (Eds.). *Public Innovation through Collaboration and Design* (pp. 70-89). New York, N.Y.: Routledge.
- Weber, M. (2004). Bureaucracy. This is a chapter. In J. M. Shafritz & A. C. Hyde (Eds.), *Public Administration: Classic Readings* (pp. 39-44). Wadsworth, Canada: Cengage Learning.
- Wolbers, J., Groenewegen, P., Mollee, J., & Bím, J. (2013). Incorporating time dynamics in the analysis of social networks in emergency management. *Journal of Homeland Security and Emergency Management*, 10(2), 555-585.
- Yin, R. K. (2009). *Case study research: Design and Methods*. Thousand Oaks, CA: Sage Publications.
- Zaltman, G., Duncan, R. & Holbek, J.(1973). *Innovations and Organizations*. New York, N.Y.: John Wiley & Sons.



## Dissertation's appendix (Dutch article)

### Leergedrag van Ambtenaren in Netwerken

Geschreven door Vidar Stevens en Lars Dorren

#### ABSTRACT

In Vlaanderen, maar ook op andere plaatsen in de wereld, maken hiërarchische benaderingen van beleidsvorming plaats voor netwerkbenaderingen. Hierbij overheerst het idee dat vertegenwoordigers van verschillende organisaties en beleidssectoren van elkaar leren als ze worden samengebracht. Dat maakt het makkelijker om gerichtere oplossingen voor complexe problemen als kustbescherming, klimaatverandering of duurzame mobiliteit te ontwikkelen. Ambtenaren in samenwerkingsverbanden leren echter niet zomaar van elkaar. Deze paper laat zien dat leergedrag van ambtenaren afhangt van wederkerigheid, transitiviteit, populariteit van een vertegenwoordiger, gelijkgestemdheid, het belang van deelname van een ambtenaar's organisatie in het netwerk, en de ervaring van een ambtenaar in het netwerk. Autonomie, onderling vertrouwen, het type organisatie, de rol en takenpakket van de voorzitter en projectleider, en de mate van openheid van een ambtenaar blijken daarentegen geen verklarende factoren te zijn.

**Key words:** leergedrag, ruimtelijke ordening, samenwerking, ambtelijke netwerken, governance.

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## Introductie

Overheden maken steeds meer gebruik van ambtelijke netwerken om sector-overschrijdende beleidsproblemen aan te pakken. In deze netwerken wisselen ambtenaren informatie en ideeën uit. Door het uitwisselen van informatie en ideeën leren ambtenaren van elkaar. Als ambtenaren ideeën uitwisselen vertonen ze, met andere woorden, leergedrag. Hierdoor ontstaat er onder vertegenwoordigers in ambtelijke netwerken meer kennis over de problematiek die zij gezamenlijk willen aanpakken. Dit stelt hen vervolgens in staat om tot gerichtere oplossingen voor complexe problemen te komen. Bovendien vergroot samenwerken in netwerken, zo is het idee, de samenhang van beleid.

De praktijk is echter vaak weerbarstiger. Het samenbrengen van ambtenaren in netwerken zorgt niet automatisch voor goede resultaten. Onderzoek laat zien dat ambtenaren in netwerken soms juist contraproductief gedrag vertonen: ze werken weinig samen, leren niet van elkaar, of gebruiken het netwerk voor strategische doeleinden. *Waarom* ambtenaren leergedrag of contraproductief gedrag vertonen, is nog weinig onderzocht. In dit artikel gaan wij op zoek naar redenen waarom ambtenaren in administratieve netwerken meer leergedrag vertonen naar sommige ambtelijk vertegenwoordigers dan naar andere vertegenwoordigers.

In dit artikel onderzoeken wij op kwantitatieve wijze (met behulp van de ‘Exponential Random Graph’ methodologie) leergedrag in het Vlaams ambtenarennetwerk ‘Het Ambtelijk Forum (AF)’, een administratief netwerk rondom de ontwikkeling van het Witboek Beleidsplan Ruimte Vlaanderen. Dit netwerk bestond uit twaalf vertegenwoordigers, afkomstig uit verschillende beleidsdomeinen. Van deze vertegenwoordigers is nagegaan met wie zij het meeste contact hadden in zake het uitwisselen van ideeën en informatie tijdens het adviestraject. Hieruit komen bepaalde patronen naar voren, die wij vervolgens aan de hand van analyse kunnen verklaren. Op deze manier krijgen wij een realistisch inzicht in de onderlinge relaties in het AF, en zijn wij in staat een antwoord te geven op onze hoofdvraag:

*Waarom delen ambtenaren makkelijker ideeën en informatie met sommige vertegenwoordigers in ambtelijke netwerken dan met andere vertegenwoordigers?*

Onze analyse laat zien dat de mate van leergedrag van vertegenwoordigers in ambtelijke netwerken voornamelijk afhangt van wederkerigheid, transitiviteit, populariteit van een vertegenwoordiger, gelijkgestemdheid, het belang van deelname van een ambtenaar’s organisatie in het netwerk, en de ervaring van de ambtenaar in het netwerk. Autonomie, onderling vertrouwen, het type organisatie, de rol en takenpakket van de voorzitter en projectleider, en de mate van openheid van een ambtenaar blijken geen verklarende factoren te zijn.

Het artikel opent met een kort overzicht van wat er in de academische literatuur wordt geschreven over de toenemende noodzaak van samenwerken in netwerken. In paragraaf 3 staan wij uitgebreider stil bij de casus die wij bestuderen. Paragraaf 4 gaat vervolgens in op mogelijke variabelen die leergedrag van ambtenaren beïnvloeden. Paragraaf 5 bevat informatie over hoe de dataverzameling en -analyse plaatsvond. Na het presenteren van de resultaten in paragraaf 6 sluiten wij af met een reflectie op wat deze resultaten betekenen voor het management van ambtenarennetwerken in Vlaanderen (paragraaf 7).

## **De toenemende vraag naar transversaal beleid**

De samenleving verandert continu, en de overheid verandert mee. Nieuwe uitdagingen vragen niet alleen om nieuw beleid, maar ook om nieuwe manieren van organiseren. In de afgelopen jaren zijn met name een drietal ontwikkelingen van invloed geweest op de manier waarop de overheid zich heeft georganiseerd. Ten eerste is er een toenemende aandacht voor complexiteit en ontembare problemen. 'Ontembaarheid' kan hier drie dingen betekenen (Danken, Dribbisch en Lange, 2014). Ten eerste kan een probleem ontembaar zijn in de zin dat het onoplosbaar is of lijkt. In die gevallen is het probleem dat het lastig is tot een finale oplossing te komen. Ontembaar kan ook betekenen dat het probleem een conflict is tussen een groot aantal actoren, die allemaal een zeer verschillende visie en waarden hebben. Tot slot kan ontembaar inhouden dat een probleem lastig definieerbaar is. In deze gevallen is afbakening een probleem: welke factoren zijn wel of geen onderdeel van het probleem? Ontembare problemen laten zich, met andere woorden, niet keurig binnen de bevoegdheden van één departement of agentschap vangen, en lijken te vragen om een transversale aanpak (Laegreid en Christensen, 2007).

Naast een toenemende aandacht voor ontembaarheid is er, ten tweede, ook een toenemende focus op het op orde maken van de overheidsfinanciën. Aangescherpte Europese regelgeving, gericht op stabiliteit, zorgt ervoor dat lidstaten op een nieuwe manier naar hun budgetten kijken. De vraag naar hybride arrangementen tussen overheidsorganisaties neemt toe. Organisaties dienen elkaar aan te vullen, zodat geld effectiever wordt besteed en daarmee de overheidsuitgaven worden gedrukt (Keast en Mandell, 2014).

Ten derde – en tot slot – zijn burgers in toenemende mate kritisch op overheden. Internationale adviesorganen als de Wereldbank en de Organisatie voor Economische Samenwerking en Ontwikkeling dagen overheden hierom uit om transversaal te werken. Zij wijzen op de winst die te behalen valt met transversaal beleid; afstemming en samenwerking kan namelijk leiden tot meerwaarde in de vorm van coherentie (OESO, 2015; Wereldbank, 2014; World Economic Forum, 2012). Deze manieren van organiseren bieden kansen om processen te stroomlijnen en krachten te bundelen, om zo tot een optimaal functionerende overheid voor de burgers te komen.

## **De noodzaak tot leren en samenwerking binnen het Ambtelijk Forum BRV**

Een dergelijke noodzaak tot transversaal werken was ook aanwezig binnen het ruimtelijk domein van Vlaanderen. Met de groei van de Vlaamse bevolking, en hetzelfde verlangen voor de Vlaamse economie, zocht de Vlaamse Regering in 2009 onder leiding van voormalig bevoegd minister Muyters een nieuw helikopterzicht op de ruimtelijke planning, om zo secuur om te springen met Vlaanderen's 13.500 vierkante kilometer aan ruimte. Dit traject moest leiden tot de opmaak van het Beleidsplan Ruimte Vlaanderen (BRV). In dit plan, zo was het idee, zou een coherente en breed gedragen visie op de Vlaamse ruimtelijke ordening voor 2030 uiteen worden gezet. De ontwikkeling van dit plan zou geen geïsoleerd beleidsproces zijn, maar een samenspel tussen de verschillende Vlaamse beleidsdomeinen. In dit proces lag de verantwoordelijkheid niet bij één departement, maar werd deze gelijkwaardig verdeeld over de verschillende betrokken departementen.

Om dit te bewerkstelligen hebben vele experts, administraties, lokale besturen, en andere stakeholders meegewerkt aan het tekenen van krijtlijnen over hoe de ruimteverdeling in Vlaanderen er in 2030 uit moet zien. Al deze actoren werden verdeeld over verschillende fora, zoals het Expertforum, het Partnerforum, verschillende ambtelijke werkgroepen ter voorbereiding van het schrijfwerk voor het BRV, en een Ambtelijk Forum (AF). De leerinteracties in dit laatste forum zijn – zoals gezegd – het studieobject van dit onderzoek.

Het AF was een samenwerking tussen 12 vertegenwoordigers uit alle beleidsdomeinen van de Vlaamse overheid. Het AF moest zorgen voor samenhang tussen het BRV, het beleid van de beleidsdomeinen, en verschillende beleidsplannen zoals het mobiliteitsplan, het woonbeleidsplan en het MINA-plan. Tijdens de eerste fase van de ontwikkeling van het BRV bestonden de activiteiten van het AF voornamelijk uit het verzamelen en vertalen van relevante informatie en belangen, om deze vervolgens te vangen in een Groenboek. Dit moest gebeuren in een co-productief proces, waarin iedere vertegenwoordiger nadrukkelijk mee zou schrijven aan de beleidsteksten. Van iedere vertegenwoordiger werd zodoende ‘actief penhouderschap’ verwacht. Na het vaststellen van het Groenboek veranderde de rol van het AF. Het AF werd een orgaan dat advies verleende op aangeleverde werkteksten van het Witboek BRV. Dit adviestraject heeft plaatsgevonden tussen december 2015 en februari 2016.

Tijdens het opstellen van het Witboek verwachtte de Vlaamse Regering twee zaken van de ambtelijke vertegenwoordigers in het AF. Allereerst moesten vertegenwoordigers gemandateerd zijn. Hun leidend ambtenaar moest hen hebben aangewezen om hun beleidsdomein te vertegenwoordigen. Dit betekende ook dat iedere vertegenwoordiger goed terug moest koppelen naar haar of zijn beleidsdomein. Ten tweede moesten deelnemers van het AF een open houding aannemen in het adviestraject. Ze werden geacht loyaal ideeën en informatie te verstrekken, zonder de processen in hun eigen domein af te willen schermen. Er moest, kortom, geleerd worden.

## **Factoren die het leergedrag in ambtelijke netwerken kunnen beïnvloeden**

In dit artikel focussen wij voornamelijk op deze tweede verwachting van de Vlaamse Regering. Om te kunnen meten of deelnemers aan het AF van elkaar geleerd hebben, hebben wij ervoor gekozen om te focussen op gedrag dat geassocieerd is met leren. Dit gedrag bestaat uit het uitwisselen van ideeën en informatie met een ander persoon (Van den Bossche et al., 2011). De keuze van een ambtenaar om dergelijk gedrag naar andere individuen in het netwerk te vertonen kan van allerlei factoren afhankelijk zijn. Voor dit onderzoek hebben wij een selectie van factoren gemaakt waarvan wij menen dat deze het beste overeenkomen met de praktijk binnen het AF. Deze hebben wij verdeeld in twee clusters: persoonlijke factoren en externe factoren. In het volgende deel van dit artikel zullen wij deze twee clusters van factoren nader toelichten.

### **Persoonlijke factoren**

Zoals aangeven kent het AF een lange traditie. Sommige vertegenwoordigers zijn vanaf het begin betrokken, terwijl anderen pas in het adviestraject actief zijn geworden. Zij vervingen bijvoorbeeld tijdelijk een collega, of namen het takenpakket over. Vandaar dat wij, allereerst,

de tijd dat een ambtenaar actief is binnen het AF meenemen als factor binnen onze studie. Wij hebben het vermoeden dat mensen die langer bij het netwerk betrokken zijn, de gebruiken en personen in het netwerk beter kennen. Dit zou hen eerder bereid maken om informatie en ideeën met anderen te delen.

Verder kijken wij naar de persoonlijke motivatie van vertegenwoordigers. Wij verwachten dat ambtenaren die van mening zijn dat het uiteindelijke Beleidsplan Ruimte Vlaanderen hun werkzaamheden zal vergemakkelijken, eerder bereid zijn om samen te werken. Dit zou kunnen betekenen dat zij makkelijker informatie en ideeën uitwisselen in het administratief netwerk.

Sommige vertegenwoordigers in het AF werkten voor agentschappen in plaats van beleidsdepartementen. Kenmerkend voor agentschappen is dat zij zich meer bezighouden met de implementatie van beleid dan de voorbereiding. Mogelijkerwijs hebben vertegenwoordigers van agentschappen dus minder affiniteit met beleidsvoorbereidingsprocessen. Dit kan er voor zorgen dat vertegenwoordigers van agentschappen het lastiger vinden om informatie en ideeën te delen met andere vertegenwoordigers in het AF. Om deze reden hebben wij het type organisatie waar ambtenaren voor werken meegenomen in onze analyse.

De mate van autonomie die ambtenaren ervaren kan ook bepalend zijn voor hun leergedrag in netwerken. Als ambtenaren het gevoel hebben dat zij naar eigen inzicht mogen handelen, is het voor hen wellicht makkelijker informatie en ideeën te delen met vertegenwoordigers van andere beleidsdomeinen.

### **Externe factoren**

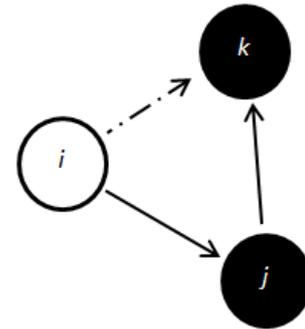
De tot nu toe genoemde factoren zeggen iets over de persoonlijke situatie van een ambtelijk vertegenwoordiger. De keuze om wel of geen leergedrag te vertonen, hangt echter ook af van de kenmerken en gedragingen van de andere vertegenwoordigers in het netwerk.

Een van de belangrijkste externe factoren is volgens ons vertrouwen in 'de ander'. Als de ene ambtenaar de ander vertrouwt, maakt dat informatie uitwisselen waarschijnlijk gemakkelijker. Andere externe factoren die wij meenemen in het onderzoek zijn: gelijkgestemdheid over mogelijke oplossingen voor het beleidsprobleem, en de mate waarin de ambtenaar van mening is dat de deelname van de organisatie van de ander zeer belangrijk is voor het oplossen van de ruimtelijke problematiek.

Daarnaast bestuderen wij het effect van vier verschillende gedragingen van 'de ander' die van invloed zijn op de keuze van een ambtelijk vertegenwoordiger om al dan niet leergedrag naar deze persoon te vertonen: wederkerigheid, transitiviteit, populariteit, en openheid.

Wederkerigheid gaat ervan uit dat een ambtenaar leergedrag vertoont naar een andere vertegenwoordiger omdat de vertegenwoordiger eenzelfde soort gedrag laat zien. De ambtenaar belooft eigenlijk de interactie met de andere vertegenwoordiger door op een gelijke open wijze te reageren.

Transitiviteit veronderstelt dat een ambtelijke vertegenwoordiger leergedrag vertoont naar een ander omdat een derde persoon heeft aangegeven dat dit zeer nuttig is voor het groepsproces (zie figuur 26).



Figuur 26: Een transitieve leerinteractie.

Populariteit veronderstelt dat een vertegenwoordiger leergedrag vertoont naar een andere ambtenaar die informatie en ideeën heeft ontvangen van veel andere vertegenwoordigers in het netwerk. Deze populaire vertegenwoordiger is dus een bron van informatie, en daarom interessant om een relatie mee aan te gaan.

Openheid heeft te maken met hoe open en sociaal ambtelijke vertegenwoordigers zijn; hoe socialer sommige vertegenwoordigers zich opstellen, hoe groter de kans dat andere vertegenwoordigers leergedrag richting hen vertonen.

Wij controleren voor de rol en het takenpakket van de voorzitter en projectleider van het AF. Wij veronderstellen dat de interacties van de projectleider en de voorzitter voornamelijk zijn bedoeld om dialoog in het ambtenarennetwerk te stimuleren. Door interactiepatronen van de voorzitter en de projectleider te isoleren, zijn wij in staat om alleen de relaties tussen de 'gewone' ambtenaren te bestuderen.

## Dataverzameling en -analyse

Voor het verzamelen van de benodigde data hebben wij alle vertegenwoordigers van het AF gevraagd een vragenlijst in te vullen. Dit hebben zij ook allemaal gedaan. In de bijlage treft u een overzicht van de vragen uit de vragenlijst die relevant zijn voor de analyses in dit artikel. Om zicht te krijgen op wie met wie heeft geïnteracteed in het netwerk, hebben wij de respondenten gevraagd aan te geven wie van de andere vertegenwoordigers in het netwerk ideeën en informatie met hen deelden. Op deze manier voorkwamen wij dat de individuen hun eigen interactiepatronen overdreven. Door middel van deze vraag waren wij tevens in staat de factoren wederkerigheid, transitiviteit, populariteit en openheid te modelleren.

Voor de analyse hebben wij gebruik gemaakt van de 'Exponential Random Graph'-methodologie (ERGM). Deze methodologie laat, in tegenstelling tot regressieanalyse, *wel* toe om verklarende analyses te doen met netwerkdata (zie voor meer info Stevens en Verhoest, 2016). Voor de analyse en modelselectie hebben wij de procedure gevolgd die Goodreau (2007) uitgebreid heeft beschreven<sup>34</sup>. Deze procedure gaat op zoek naar een model dat het beste verklaart waarom personen in het netwerk wel of geen relatie of verbinding met een ander zijn aangegaan. Het best verklarende model presenteren wij in de volgende paragraaf. Niet alle onafhankelijke variabelen zijn uiteindelijk meegenomen in het model dat wij

<sup>34</sup> Wie geïnteresseerd is in het R-script van de ERGM analyse voor replicatiedoeleinden kan contact met ons opnemen.

presenteren, omdat onderzochte modellen met deze variabelen degenerereerden<sup>35</sup>, niet tot lagere AIC-waarde<sup>36</sup> leidden, of geen verbeterde visuele fit opleverden.

## Resultaten

Tabel 1 presenteert de uitkomsten van de ERGM-analyse omtrent de leerinteracties in het AF Witboek BRV. Uit de analyse komen zes onafhankelijke variabelen als significant naar voren: wederkerigheid, transitiviteit, populariteit, het aantal jaren dat een ambtenaar vertegenwoordiger is, gelijkgestemdheid, en het veronderstelde belang van deelname van de organisatie van een vertegenwoordiger. Gezamenlijk geven deze uitkomsten een dynamisch beeld van de interacties binnen het ambtenarennetwerk.

Tabel 15: Resultaten ERGM analyse.

Variabelen	$\theta$	(se)	P value
Wederkerigheid	1.4274	0.6587	0.03216*
Openheid	-	-	-
Transitiviteit	0.2408	0.1183	0.04395*
Populariteit	-1.9514	0.7921	0.01513*
Aantal jaren vertegenwoordiger	0.2885	0.1236	0.02121*
Autonomie	-	-	-
Voorzitter	-1.2037	0.7562	0.11400
Persoonlijke motivatie	-	-	-
Projectleider	-0.6200	0.5471	0.25934
Type organisatie (agentschap)	-	-	-
Gelijkgestemdheid	1.5280	0.4738	0.00162**
Vertrouwen	-	-	-
Belang deelname organisatie vertegenwoordiger	1.1011	0.5175	0.03537*
<b>Goodness of fit</b>	LL=-62.64285, df=13, AIC=137, BIC=163		

Zo laat het feit dat wederkerigheid significant is zien dat leergedrag binnen het AF werd beloond. Vertegenwoordigers die niet strategisch handelden, maar open en transparant informatie deelden, hadden volgens onze analyse een hogere kans om op hun beurt weer leergedrag van anderen te ontvangen. Sommige van de vertegenwoordigers handelden, daarentegen, wel strategisch. Zij hadden voornamelijk leerinteracties met vertegenwoordigers van organisaties die zij het meest belangrijk vonden voor het aanpakken en oplossen van de ruimtelijke beleidsuitdagingen.

De significantie van 'transitiviteit' geeft aan dat er binnen het AF een hoge mate van groepsvorming bestond. Gelijkgestemdheid lijkt hier echter een belangrijke rol te spelen. Het

<sup>35</sup> In een degenererend model wordt de samenhang tussen de meegenomen variabelen minder goed zichtbaar.

<sup>36</sup> De AIC-waarde van een model wijst op de verklarende kwaliteit van dat model.

feit dat deze variabele als significant uit de analyse komt, suggereert dat groepsvorming voornamelijk plaatsvond onder ambtenaren met eenzelfde zienswijze.

Verder bestond er een verschil van populariteit tussen vertegenwoordigers. Echter, in tegenstelling tot wat wij eerder vermoedden blijkt het niet zo te zijn dat een vertegenwoordiger leergedrag vertoont naar een andere ambtenaar omdat deze informatie en ideeën heeft ontvangen van veel andere vertegenwoordigers in het netwerk. In plaats daarvan blijkt dat het niet aantrekkelijk was om leergedrag te tonen naar een individu die al veel benaderd was door andere vertegenwoordigers in het netwerk.

Als laatste blijkt dat vertegenwoordigers die al langer deel uitmaken van het AF, makkelijker ideeën en informatie deelden met anderen. Dit betekent dus ook dat 'nieuwelingen' relatief minder samenwerkten in termen van informatie delen.

Wat verder opvalt in de analyse, is dat het gedrag van de projectleider en voorzitter in het AF weinig van invloed was op de leerinteracties in het ambtelijk netwerk. Zij lieten het adviesproces vooral over aan de groep, zonder al te veel te interveniëren. De variabelen autonomie, persoonlijke motivatie, type organisatie, mate van openheid, en onderling vertrouwen zijn niet opgenomen in dit verklarende model, omdat de modellen met deze variabelen degenereerden, een hogere AIC-waarde gaven, of tot een slechtere verklarende *fit* met onze empirische data leidden. Wat volgt is een reflectie op wat deze resultaten betekenen voor het netwerkmanagement van transversale beleidsvorming in Vlaanderen.

### **Wat betekenen onze bevindingen voor het netwerkmanagement van transversale beleidsvorming in Vlaanderen?**

De laatste jaren zet de Vlaamse overheid steeds meer in op samenwerking tussen overheidsorganisaties ter bevordering van transversale beleidsvorming. Zij doet dit bewust: zowel in het Groenboek Bestuur en Visie 2050, als in het voorbereidingsdocument van het Witboek 'Oplossingsgericht Samenwerking als Netwerkorganisatie', is samenwerken in netwerken een ambitie. De resultaten van dit onderzoek kunnen dienen als handvatten voor de Vlaamse overheid. Ze helpen de overheid het netwerkmanagement- en leiderschapspotentieel van haar managementteam verder uit te bouwen, en op deze manier beleidsdomeinoverschrijdende samenwerking te bevorderen. In deze paragraaf zullen wij een aantal concrete aanbevelingen doen.

Zo adviseren wij, allereerst, op basis van onze bevindingen dat voorzitters van ambtelijke netwerken *actief* hun best moeten doen om ambtelijke vertegenwoordigers met elkaar in contact te brengen. Dit kan eventueel, zoals door Agger en Sørensen (2016) is gesuggereerd, door middel van lichte dwang. Als dit niet gebeurt, is de kans klein dat ambtenaren met zeer verschillende opvattingen met elkaar in contact komen. Een dergelijke groepsvorming ondermijnt het potentieel om innovatief beleid uit te denken, omdat vertegenwoordigers voornamelijk bevestigd worden in hun denkbeelden. Zij komen minder in aanraking met kritiek, en zullen daarom minder snel van visie veranderen. Alleen door ambtenaren met andere visies met elkaar in contact te brengen, kan een groep vervolgens stappen zetten om te komen tot een gedeelde beleidsvisie.

Een tweede advies dat wij netwerkmanagers willen meegeven, is dat zij de tijd moeten nemen om 'nieuwelingen' te introduceren in een ambtelijk netwerk. Uit onze analyse blijkt dat voor iemand die nieuw is in een samenwerkingsverband veel op hem of haar afkomt. Een al bestaande groep heeft zo zijn eigen regels en gebruiken, waar je als nieuweling eerst bekend mee moet raken. Om nieuwkomers te laten wennen, helpt het dus als de voorzitter *eerst* investeert in de persoonlijke relaties in het ambtelijk netwerk, vooraleer voortvarend naar oplossingen en compromissen te zoeken.

Een derde, en laatste, advies dat wij geven is bedoeld om strategisch gedrag in ambtelijke netwerken te verminderen en leergedrag te stimuleren. Enerzijds blijkt uit de analyse dat vertegenwoordigers die transparant handelden werden beloond voor hun goede gedrag. Anderzijds deelden vertegenwoordigers echter ook bewust informatie en ideeën met vertegenwoordigers die volgens hen het meest belangrijk waren voor het aanpakken van de ruimtelijke problematiek. Hoewel het niet onlogisch is dat netwerkpartners neigen naar andere partners van wie zij verwachten dat zij een belangrijke rol kunnen vervullen in het proces, bestaat het risico dat dit een bepaalde machtsbalans creëert binnen het ambtelijke netwerk.

Binnen het Ambtelijk Forum werd deze machtsbalans gedeeltelijk hersteld (*zie* negatief significant effect populariteit), echter denken wij dat een netwerkmanager er toch goed aan doet om ook oog te houden voor de machtsverhoudingen in een netwerk. Zij of hij kan hierop anticiperen door 'minder belangrijk geachte' actoren een nadrukkelijke plek in het beleidsvormingsproces te geven. Op deze manier wordt de uitkomst van het beleidsproces niet enkel een strijd van de sterksten, maar een gespreide verantwoordelijkheid van *alle* betrokken vertegenwoordigers en organisaties in het netwerk.

Wij realiseren ons dat netwerkmanagement maatwerk is. Elk ambtelijk netwerk vraagt om een eigen managementstijl. Werken in netwerken vereist improvisatievermogen van alle deelnemers, en bovenal van de voorzitter van het netwerk. De kwesties en personen die actief zijn in een ambtelijk netwerk verschillen. Wat 'goed management' dus inhoudt, hangt af van de dynamieken die er op dat moment spelen. Met behulp van de ERGM-methodologie hebben wij een aantal dynamieken binnen het Ambtelijk Forum Witboek BRV voor u in kaart gebracht. Door vervolgens het verklaren van de leerinteractiepatronen in het AF hebben we, hoewel management maatwerk blijft, een aantal lessen getrokken die volgens ons nuttig zijn voor iedere manager die als taak heeft eenheid in een administratieve samenwerking te brengen.

## Referenties

Agger, A., & Sørensen, E. (2016). Managing Collaborative Innovation in Public Bureaucracies. *Planning Theory*. doi:10.1177/1473095216672500.

Christensen, T., & Laegreid, P. (2007). The Whole-of-Government Approach to Public Sector Reform. *Public Administration Review*, 67(6), 1059-1066.

Danken, T., Dribbisch, K., & Lange, A. (2014). *Fourth Years of Wicked Problems*. Paper presented at the 2<sup>nd</sup> WIPCAD Conference. Potsdam, Germany, December 4-6.

Goodreau, S.M. (2007). Advances in exponential random graph ( $p^*$ ) models applied to a large social network. *Social Networks*, 29(1), 231-248.

Keast, R.L. & Mandell, M. (2014). The collaborative push: moving beyond rhetoric and gaining evidence. *Journal of Management & Governance*, 18(1), 9-28.

OECD. (2015). *Towards a Framework for the Governance of Infrastructure*. OECD Publishing.

Stevens, V. & Verhoest, K. (2016). A next step in collaborative policy innovation research: analysing interactions using Exponential Random Graph Modelling. *The Innovation Journal: The Public Sector Innovation Journal*, 21(2), 1-20.

Van den Bossche, P., Gijssels, W., Segers, M., Woltjer, G., & Kirschner, P. (2011). Team Learning: building shared mental models. *Instructional Science*, 39(3), 283-301.

World Economic Forum. (2012). *Strategic Infrastructure*. Geneva: World Economic Forum.

Wereldbank. (2014). *Public-Private Partnerships Reference Guide*. World Bank.

## Bijlage

<u>Variabele:</u>	<u>Survey-vraag:</u>	<u>Antwoordschalen</u>
<b>Leergedrag (en op basis hiervan ook de factoren: wederkerigheid, transitiviteit, populariteit en openheid)</b>	Welke vertegenwoordigers waren gedurende het afstemmingsproces van het Witboek het meest open in het delen van nieuwe ideeën en informatie met u?	Noem maximaal vijf vertegenwoordigers.
<b>Aantal jaren vertegenwoordiger</b>	Hoelang (afgerond in jaren) bent u al vertegenwoordiger namens uw organisatie binnen het Ambtelijk Forum BRV?	Aantal jaren.
<b>Autonomie</b>	Kunt u aangeven in welke mate u het gevoel had dat u in de interacties met de andere vertegenwoordigers van het Ambtelijk Forum BRV, de volledige vrijheid had om te handelen naar eigen inzicht?	Tienpuntschaal waarbij '1' staat voor 'helemaal niet mee eens' en '10' staat voor 'in heel grote mate mee eens'.
<b>Voorzitter</b>	Bent u voorzitter van het Ambtelijk Forum BRV?	Ja of nee.
<b>Persoonlijke motivatie</b>	In hoeverre denkt u dat het voorgestelde Witboek BRV uw gebruikelijke werkzaamheden in de toekomst zal vergemakkelijken?	Tienpuntschaal waarbij '1' staat voor 'helemaal niet' en '10' staat voor 'helemaal wel'.
<b>Projectleider</b>	Bent u projectleider van het Ambtelijk Forum BRV?	Ja of nee.
<b>Type organisatie (agentschap)</b>	Werkt u voor een beleidsdepartement of agentschap?	Aangeven welke van toepassing is.
<b>Gelijkgestemdheid</b>	Welke vertegenwoordigers hadden veelal dezelfde ideeën als u over mogelijke beleidsmaatregelen voor het Witboek BRV?	Noem maximaal vijf vertegenwoordigers.
<b>Vertrouwen</b>	Welke vertegenwoordigers deden volgens u het meest hun best om het afstemmingsproces binnen het Ambtelijk Forum BRV tot een goed einde te brengen?	Noem maximaal vijf vertegenwoordigers.
<b>Belang deelname organisatie vertegenwoordiger</b>	Welke organisaties ziet u als de belangrijkste organisaties om de ruimtelijke problematiek aan te pakken?	Noem maximaal vijf organisaties.



## Samenvatting (summary in Dutch)

Overheden maken steeds meer gebruik van ambtelijke netwerken om sector-overschrijdende beleidsproblemen aan te pakken. In deze netwerken werken ambtenaren van verschillende organisaties samen. Zij wisselen hierbij informatie en ideeën uit. Door het uitwisselen van informatie en ideeën leren ambtenaren van elkaar. Hierdoor ontstaat er onder vertegenwoordigers in ambtelijke netwerken meer kennis over de problematiek die zij gezamenlijk willen aanpakken. Dit stelt hen vervolgens in staat om tot samenhang van beleid te komen. Bovendien vergroot samenwerken in netwerken, zo is het idee, de ontwikkeling van innovatieve beleidsoplossingen voor complexe beleidsproblemen. Tegen deze achtergrond worden dergelijke ambtelijke samenwerkingen ook wel gezien als samenwerkingsprocessen voor 'beleidsinnovatie'.

De ambtelijke praktijk is echter vaak weerbarstiger. Het samenbrengen van ambtenaren in netwerken zorgt niet automatisch voor meer innovatieve beleidsresultaten. Onderzoek laat zien dat ambtenaren in netwerken soms juist contraproductief gedrag vertonen: ze werken weinig samen, leren niet van elkaar, of gebruiken het netwerk voor strategische doeleinden. Waarom ambtenaren leergedrag of contraproductief gedrag vertonen, is nog weinig onderzocht. Daarnaast is er weinig bekend over de wijze waarop 'management' het ontwikkelen van innovatieve beleidsoplossingen in administratieve samenwerkingsverbanden kan stimuleren. Daarom staat dit proefschrift stil bij de vraag hoe het management van deze ambtelijke netwerken de innovatie-capaciteit van dergelijke beleidsnetwerken kan vergroten.

In dit proefschrift worden op kwalitatieve en kwantitatieve wijze de interactieve dynamieken en managementpraktijken van drie ambtelijke netwerken onderzocht: het Nationale Plan voor Duurzaam Transport, het Beleidsplan Ruimte Vlaanderen, en het Vlaams Kustbeschermingsprogramma. Uniek is het gebruik van de '*exponential random graph*'-methodologie (ERGM). Deze methode is zelden toegepast in bestuurskundig onderzoek. Met behulp van ERGM is het mogelijk om verklarende uitspraken te doen over netwerkinteracties tussen leden van een ambtelijk netwerk. Andere methodes die zijn toegepast in dit onderzoek zijn: interviews, documentanalyse, en surveys. Uit het onderzoek komen acht managementpraktijken naar voren die de capaciteit voor het ontwikkelen van innovatieve beleidsoplossingen in administratieve netwerken vergroten.

Zo blijkt, allereerst, dat een netwerkmanager zich er van bewust moet zijn dat de meeste menselijke acties en interacties zonder medeweten van en buiten het gezichtsveld van de netwerkmanager plaatsvinden. Bovendien vinden er vaak meerdere van deze acties en interacties tegelijkertijd plaats. Meer informele acties als mailcontact, het opstellen van beleidsnotities en bilaterale contacten, bepalen net zo goed de richting van het ontwikkelingsproces als formele, door de manager georganiseerde bijeenkomsten van het netwerk. In de literatuur wordt deze netwerkdynamiek van gelijktijdige acties binnen en buiten de controle van de manager ook wel 'synchroniciteit' genoemd. Synchrone acties en interacties kunnen tegengesteld aan elkaar werken. Op andere momenten versterken deze synchrone krachten elkaar juist.

Specifiek toont dit proefschrift aan dat een proactieve netwerkmanagementstijl nodig is om controle en overzicht te houden over alle formele en informele netwerkkrachten en -processen die van invloed zijn op de ontwikkeling van innovatieve beleidsoplossingen; zeker als sommige van deze acties en interacties gericht zijn op het vertragen of tegenwerken van besluitvorming. Meer concreet houdt deze proactieve managementstijl in dat de netwerkmanager niet moet denken dat het slechts haar of zijn taak is twee keer in de maand met alle betrokken partijen in de ambtelijke samenwerking samen te zitten om zaken te bespreken en af te stemmen. In plaats daarvan zal de netwerkmanager een actieve rol moeten spelen in zowel de formele als informele sferen van de netwerksamenwerking. Dit behelst bijvoorbeeld het onderhouden van persoonlijk contact met alle betrokken personen, het in het oog houden van de (sub)processen en handelingen van deze afzonderlijke netwerkpartners, en interveniëren in zowel informele als formele gespreksituaties wanneer blijkt dat de gang van zaken niet gaat zoals de planning was. Deze betrokkenheid van de netwerkmanager vergroot de innovatieve capaciteit van de samenwerking, doordat bij deelnemers het gevoel groeit dat er actief naar synergie wordt gezocht in de samenwerking en dus iedereen haar of zijn steentje bijdraagt, of moet bijdragen, aan het ontwikkelen van innovatieve beleidsantwoorden. Feitelijk zit de kracht van een dergelijke managementstijl in de voorbeeldfunctie die de netwerk manager hiermee vertolkt.

Een tweede observatie in het proefschrift is dat 'de bureaucratie' de innovatiecapaciteit van ambtelijke samenwerkingen versterkt. Deze observatie is tegengesteld aan het beeld dat veel sociale wetenschappers en beleidsambtenaren hebben. Sociale wetenschappers zoals Considine, Lewis en Alexander (2009) stellen dat hiërarchische controle en coördinatie ambtenaren geen ruimte geeft om over structuurgrenzen met andere (ambtelijke) vertegenwoordigers van overheidsorganisaties samen te werken aan innovatieve en geïntegreerde beleidsoplossingen. Dit onderzoek toont echter aan dat ambtenaren nog steeds de meeste werktijd spenderen binnen hun eigen 'bureaucratische' organisatie. Dat er de laatste jaren een toename is in het aantal inter-organisatorische netwerkverbanden, betekent niet dat er alleen maar geïnnoveerd kan worden als deze innovatieprocessen plaatsvinden buiten de hiërarchische organisatiestructuren. Dit proefschrift laat specifiek zien dat het – voor een accumulerend innovatie-effect (d.w.z.: een extra impuls in de totstandkoming en opschaling van het innovatie-idee) – belangrijk is dat de netwerkmanager niet alleen in contact staat met hen die namens een organisatie aan een netwerk deelnemen, maar ook met de leiding en de afdelingen van de deelnemende organisaties.

Ten derde toont dit proefschrift aan dat het voor het slagen van innovatie-ontwikkelingsprocessen belangrijk is dat de netwerkmanager continue de meerwaarde van samenwerking benadrukt. Als dit niet gebeurt, bestaat de kans dat leden van het administratieve netwerk hun interesse in de beleidssamenwerking verliezen. In de literatuur wordt door samenwerking gegenereerde meerwaarde vaak 'collaborative value' of 'collaborative advantage' genoemd. Kortweg wordt hiermee bedoeld dat door het bundelen van krachten betere beleidsuitkomsten kunnen worden gerealiseerd, dan wanneer een organisatie eigenhandig zou trachten een beleidsprobleem aan te pakken. In het begin van een samenwerking is het echter lastig in te schatten wat uiteindelijk de bonus van de samenwerking zal zijn; zeker als er tussen netwerkliden verschil van inzicht of zelfs conflict bestaat over probleemdefinities, oplossingen en/of aanpak. Daarom is het essentieel, zo blijkt uit dit doctoraat, dat de netwerkmanager op andere 'tussentijdse' winsten van samenwerking

stuurt en deze ook benoemt. Hierbij valt te denken aan bijvoorbeeld kennisuitbreiding van individuele leden, andere mensen leren kennen die in hun dagelijks werk met een zelfde problematiek bezig zijn, toegang tot informatie van andere organisaties, het ontwikkelen van skills om samen te werken, het creëren van een gezamenlijke werksfeer, etc. Hierdoor kunnen netwerkleden stap voor stap hun netwerkactiviteiten uitbreiden om tot een beleidsuitkomst te komen die voor iedereen als winst wordt gezien.

Een vierde observatie die in het proefschrift wordt gedaan, is dat het belangrijk is dat de netwerkmanager vooral aan het begin van een collaboratief beleidsinnovatieproces sterk sturend handelt. Dit moet er toe leiden dat er een stevig en duidelijk fundament wordt opgezet vanuit waar de overige leden van het netwerk stapsgewijs beter kunnen (samen)werken. In het begin van het proces kan het voor een voor een individueel lid van het netwerk namelijk lastig zijn om de andere personen aan tafel goed in te schatten. Anderzijds hebben sommige netwerkleden wellicht al eerder samengewerkt, en kunnen hier positieve herinneringen (of negatieve) aan hebben over gehouden. Deze twee zaken, zo blijkt uit de empirische casussen in dit doctoraat, leiden er toe dat de netwerkmanager aan het begin van het collaboratief innovatie proces het netwerk 'draagt'. De keuzes die de netwerkmanager hierbij maakt, zorgen er voor dat er nieuwe verbindingen ('draagbalken') tussen personen kunnen ontstaan die de 'volhoudbaarheid' (d.w.z.: dat de gesprekken tussen de netwerkleden ook leiden tot resultaten) van het netwerk garanderen. Specifiek is gebleken dat het helpt als de netwerkmanager aan het begin stuurt in wat er in de eerste vergaderingen wordt besproken, netwerkleden vraagt naar hun inbreng in het besluitvormingsproces, en huiswerk meegeeft aan de netwerkleden om input en gespreksstof voor volgende vergaderingen te garanderen.

De vijfde conclusie van dit proefschrift is dat het belangrijk is dat de persoon die gekozen wordt als netwerkmanager ervaren is en in staat is te improviseren wanneer patstellingen ontstaan. Idealiter zijn de besluitvormingsprocessen over beleidsinnovaties voorspelbaar. Dit probeert de netwerkmanager te realiseren door aan het begin van het proces afspraken te maken over onder anderen stemregels, conflictmanagement en het uitwisselen van kennis en ideeën. Desondanks zijn besluitvormingsprocessen geen maakbare processen. De netwerkmanager kan de dynamiek niet volledig zo kneden dat zaken precies verlopen als dat de netwerkmanager bedoeld heeft. Daarom is het ook belangrijk wanneer dialogen vastlopen, misverstanden bestaan over procedures, er onenigheid is over afgesproken zaken, of zich andere onverwachte gebeurtenissen in het netwerk voordoen, de netwerk manager in staat is direct te reageren en te improviseren om het proces weer recht te trekken.

Zoals gezegd helpt het ook als de netwerkmanager ervaring heeft met het beleidsonderwerp waar binnen het innovatieproces over wordt gesproken. Zeker in transformatieprocessen (zoals in dit proefschrift – duurzame mobiliteit, ruimtegebruik en kustbescherming) waar veel technische beleidsdetails besproken worden is het aan te raden een netwerkmanager te selecteren die staat is de beleidsmaterie goed te doorgronden en vanuit zijn of haar expertise in staat is om schakels te leggen tussen de inhoudelijke bijdrages van netwerkleden die vanuit verschillende beleidsexpertises tegen het beleidsprobleem aan kijken. Op deze manier kunnen er meer kruisverbanden ontstaan tussen netwerkleden – en kan er een situatie worden gecreëerd waar creativiteit prevaleert boven conflict.

De zesde conclusie van dit doctoraat is dat het belangrijk is dat de netwerkmanager beschikt over gedegen mensenkennis, en deze mensenkennis gebruikt om ieder netwerklid op een juiste wijze te benaderen. Ieder netwerklid is uniek. Het verschilt per persoon hoe zij denkt, doet, waarneemt en voelt. Een netwerkmanager in een van de empirische casussen gaf als voorbeeld dat het kan per persoon volledig kan verschillen zij bedoelen als zij 'nee' zeggen tegen een suggestie van jou. Is hij of zij boos, bang, overtuigd van zijn eigen gelijk, of heeft hij of zij een hekel aan jou? In zo een situatie zijn een goede inschatting hiervan en een juiste respons hierop bepalend voor hoe netwerkliden zich verder zullen opstellen in teamverband en tot welke mate zij het management van de netwerkmanager zullen 'accepteren'. Kortom: hoe beter een netwerkmanager de drijfveren en gedragingen van mensen begrijpt, des te beter hij of zij in staat is individuen te motiveren om op een goede manier samen te werken.

Een zevende conclusie van het proefschrift is dat leren tussen netwerkliden wordt gestimuleerd wanneer de netwerkmanager optreedt als 'vertaler' tussen de verschillende partijen, exemplarisch/goed netwerkgedrag van leden beloond, en de netwerk manager oor en oog heeft voor alle stemmen van betrokken leden in het samenwerkingsverband, hoe hard ze ook schreeuwen of zwijgen. Leren wordt in de literatuur gezien als het sociale mechanisme dat ervoor zorgt dat personen door middel van socialisatie zaken anders gaan bekijken, en daardoor tot creatievere oplossingen komen (Ansell en Torfing, 2014: 10). Mensen zijn geneigd vanuit hun eigen positie en achtergrond naar een beleidsprobleem te kijken. Bij deze positie en achtergrond horen ook specifieke concepten en termen. Hierdoor gebeurt het vaak dat centrale termen voor elke persoon in een samenwerking een andere betekenis heeft. In een van de casussen bleek bijvoorbeeld dat de term 'duurzaam mobiliteitsknooppunt' door verschillende partijen anders geïnterpreteerd werd. Het is noodzakelijk dat de netwerkmanager werkt als vertaler (en in staat is verschillende interpretaties van partijen te begrijpen), strategische gedrag tussen personen afkeurt, en rekening houdt met de interpretaties van termen van alle partijen in het netwerk.

De achtste en laatste conclusie van het proefschrift luidt: de netwerk manager moet niet proberen machtsverhoudingen in het netwerk te corrigeren. In plaats daarvan moet hij of zij speelsgewijs rondom bestaande machtsverhoudingen werken. Machtsverhoudingen zorgen er voor dat dialogen een redelijk voor de hand liggende uitkomst hebben: diegene die de 'meeste' macht heeft (op basis van middelen, besluitmacht en autoriteit) beslist vaak de richting van het beleidsontwerpproces. Verschillen in macht zijn niet uit te sluiten. Dit proefschrift toont echter wel aan dat het minder voorspelbaar maken van dialogen door bijvoorbeeld het introduceren van onconventionele dialoogvormen deelnemers uitdaagt om voorbij hun eigen opvattingen te kijken en er toe aanzet de visies van anderen te gaan doorgronden. Specifiek waren de dialoogvormen 'persuasieve dialogen' en het gebruik van scherpe, provocerende stellingen gedurende de vergadering goede manieren om netwerkliden te prikkelen om echt te denken over gezamenlijk beleidsacties en -doelen.

## About the Author

Vidar Stevens studied Public Administration (2009-2012) at the Erasmus University of Rotterdam (the Netherlands). In 2014, he obtained his Research Master's degree in Public Administration and Organizational Science (with cum laude). During his studies, Vidar Stevens did various relevant internships, for example, at the Scientific Council of Government Policy in The Hague.

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