

Routledge Critical Studies in Public Management

# NETWORKS AND Collaboration in the Public Sector

# ESSENTIAL RESEARCH APPROACHES, METHODOLOGIES AND ANALYTIC TOOLS

Edited by

Joris Voets, Robyn Keast and Christopher Koliba



"Over the past three decades, scholarship of networks has grown substantially. However, scholars still need to address major challenges around conceptual, theoretical, and methodological concerns in network scholarship. This volume, edited by leading scholars, is a great contribution to methods and methodological issues in networks and network governance, which includes diverse methodological perspectives discussed by authors that have also applied them in their network research."

– Naim Kapucu, Pegasus Professor and Director at the School of Public Administration, University of Central Florida, Orlando, USA

"The editors have brought together an invaluable collection of many of the methodological approaches to network and collaboration commonly used in public administration research. The chapters include descriptions of methods as diverse as case studies and narrative inquiry, surveys, social network analysis, and agent-based modelling. Combined with the integrative and forward-looking final chapters, this book provides an excellent resource for researchers and public managers alike."

– Jenny M. Lewis, Professor of Public Policy at the University of Melbourne, Australia, and President of the International Research Society for Public Management

"Despite the vast and growing literature on governance networks and collaboration, until now a text presenting a comprehensive overview of methods and methodology of network research was missing. This book fills the gap. It discusses the nuts and bolts of well-established as well as new contemporary methods and their potentials given current and future research contexts. An essential guidebook for everyone interested in network and collaboration research: students, practitioners, early career *and* established researchers."

> – Joop Koppenjan, Professor of Public Administration at Erasmus University Rotterdam, Netherlands



# Networks and Collaboration in the Public Sector

Networks and other collaborations are central to the public sector's ability to respond to their diverse responsibilities, from international development and regional governance, to policy development and service provision. Great strides have been made toward understanding their formation, governance and management, but more opportunities to explore methodologies and measures is required to ensure they are properly understood.

This volume showcases an array of selected research methods and analytics tools currently used by scholars and practitioners in network and collaboration research, as well as emerging styles of empirical investigation. Although it cannot attempt to capture all technical details for each one, this book provides a unique catalogue of compelling methods for researchers and practitioners, which are illustrated extensively with applications in the public and non-profit sector.

By bringing together leading and upcoming scholars in network research, the book will be of enormous assistance in guiding students and scholars in public management to study collaboration and networks empirically by demonstrating the core research approaches and tools for investigating and evaluating these crucially important arrangements.

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### **Routledge Critical Studies in Public Management**

Series editor: Stephen Osborne

The study and practice of public management has undergone profound changes across the world. Over the last quarter century, we have seen

- increasing criticism of public administration as the over-arching framework for the provision of public services,
- the rise (and critical appraisal) of the 'New Public Management as an emergent paradigm for the provision of public services,
- the transformation of the 'public sector' into the cross-sectoral provision of public services, and
- the growth of the governance of inter-organizational relationship as an essential element in the provision of public services.

In reality these trends have not so much replaced each other as elided or co-existed together – the public policy processes has not gone away as a legitimate topic of study, intra-organizational management continue to be essential to the efficient provision of public services, whilst the governance of inter-organizational and inter-sectoral relationships is now essential to the effective provision of these services.

Further, whilst the study of public management has been enriched by contribution of a range of insights from the 'mainstream' management literature it has also contributed to this literature in such areas as networks and inter-organizational collaboration, innovation and stakeholder theory.

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# Networks and Collaboration in the Public Sector

Essential Research Approaches, Methodologies and Analytic Tools

Edited by Joris Voets, Robyn Keast and Christopher Koliba



First published 2020 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge 52 Vanderbilt Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

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British Library Cataloguing-in-Publication Data A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data A catalog record for this book has been requested

ISBN: 978-1-138-68272-6 (hbk) ISBN: 978-1-315-54493-9 (ebk)

Typeset in Bembo by Apex CoVantage, LLC.

### To Myrna P. Mandel

It can be said that as researchers we have been able to see further and advance knowledge by standing on the shoulders of the giants who have come before us. In the study of networks and collaboration, one such giant – in thinking if not stature – is Myrna Mandell.

Myrna was one of the very early network researchers and has influenced the research careers of all three editors of this volume, and likely most of the chapter contributors, through her mentorship, collegiality and championing of network and collaboration research. However, her impact is much broader and reaches out into the cohort of early career researchers with whom she has shared her time, her encouragement and, most of all, the knowledge accumulated over a celebrated career, which in 2016 was acknowledged with the Routledge Prize for Outstanding Contribution to Public Management Research.

In recognition and appreciation of her scholarly contribution and her friendship we dedicate this volume to our friend and colleague Myrna Mandell.



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### Acknowledgements

We want to thank the Routledge team – Jacqueline Curthoys, Laura Hussey and Jess Harrison – for their enthusiasm, support and patience in getting this volume published. We are also indebted to Hannah Murphy, whose help was invaluable in editing and submitting the final manuscript. Finally, we want to extent our gratitude to all authors who have done a marvellous job in writing the chapters as we envisaged them from the outset – an excellent collaborative result, drawing on the scholarly networks on networks and collaboration.

Joris Voets, Robyn Keast and Christopher Koliba

## Abbreviations

ABM	Agent-based model
AI	Artificial intelligence
AOT	Agency of Transportation
CSB	Common source bias
ERGM	Exponential random graph modelling
HCBS	Home and Community-Based Services
ICMA	International City/County Management Association
NAO	Network administrative organization
NGO	Non-governmental organization
ODD	Overview, design concepts, details protocol
OLS	Ordinary least squares
OSU	Ohio State University
QAP	Quadratic Assignment Procedure
QCA	Qualitative comparative analysis
NPM	New Public Management
PA	Public administration
PAR	Participatory action research
PCA	Principal Components Factor Analysis
RO-AR	Research oriented action research
SAOMS	Stochastic actor-oriented models
SEM	Structural equation modelling
SES	Socioeconomic status
SNA	Social network analysis
TCA	Theory of collaborative advantage
TPP	Transportation project prioritization
UK	United Kingdom
US	United States

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### 1 A methodological perspective on network and collaboration research

Joris Voets, Christopher Koliba and Robyn Keast

# Why a book on methods in network and collaboration research?

Networks and collaborations are now ubiquitous features of public governance systems. Around the world, local and national governments have developed policies and practices resulting in the formation of their own internally operated networks or have collaborated with other not-for-profit and sometimes for-profit bodies to create policy, governance and/or service delivery networks to work together to carry out some policy function. These networks can form through mandates, incentives or pressures to conform. There is every indication based on the literature, and especially from practice, that these collective forms of working together will remain a cornerstone of policy development and attendant service delivery. Given this current and ongoing reliance on networks and collaborative forms, and the significant efforts inherent to their formation and sustainability, there is mounting demand not just for enhanced understandings (an evidence base) of how to optimize their operation but also for evidence that they are delivering on promises and performance (Koliba 2014).

In his seminal article of 1997 Laurence O'Toole (1997) called for networks to be taken seriously in public administration. Since then a tremendous body of research, reports and literature on networks and other forms of interorganizational work has amassed (see for example, Isett et al. 2011; Popp et al. 2014; Provan, Fish and Sydow 2007; Provan and Lemaire 2012; Keast, Mandell and Agranoff 2014; Ferlie et al. 2011; Koliba et al. 2018). While acknowledging that this body of work has delivered important conceptual, theoretical and empirical contributions to the field, concerns persist that the methodological approaches to studying networks and collaboration have been underexamined (Berry et al. 2004; Milward and Provan 1998). More recently, drawn from both scholars (Kapucu, Hu and Khosa 2017; Grimmelikhuijsen, Tummers and Pandey 2017) and journal editorial boards (see for example, Perry 2012; Kelman 2015), additional voices have added to this argument that methodological advancements and improvement in rigour are needed to advance new knowledge, find causal relations, solutions to wicked problems, explanations for performance successes and failures, and new applications of network and collaborative design (Agranoff 2014: 203-204). Robinson (2006: 589), in a review of the ten years

### 2 Joris Voets et al.

since O'Toole's petition, noted that researchers were clearly treating networks seriously, but called for methodological pluralism and innovation to pursue this future research agenda. This volume was written with this need in mind.

In discussing the rise of performance measurement within government operations, Beryl Radin observes that:

If we want to operate within a complex and dynamic system, we have to know not only what its current status is but what its status will be or could be in the future, and we have to know how certain actions we take will influence the situation. For this, we need structural knowledge, knowledge of how the variables in the system are related and how they influence one another. (2006: 24)

Radin's (2006) point is worth revisiting in light of this volume. All of the methods found in this volume help to explore the relationship between the structures of inter-organizational networks and their functions. Therefore, there is a unit of analysis that is assumed here. There is also an important underlying consideration of how these networks and collaboratives are led and managed. In most instances, these methods are employed not only to describe but to evaluate, with evaluation aims being most directed to policy and practice.

Highlighting the value of using the network or other collective arrangements as the unit of analysis within the public management and administration field, Hans Bressers and Laurence O'Toole observe:

An advantage of a network perspective is that it can be used to direct attention to the larger structures of interdependence. Instead of assuming that influence takes place only through direct and observable interactions, whether as personal relationships or among representatives of institutional interests, *a network approach* – *applied to portions of a policy process as varied as formulation and implementation* – *can investigate how the larger structure can have systematic effects on the behavior of individual actors as well as on the content of decisions, policy responses, and implementation efforts.* A network approach thus offers the chances to continue both interpersonal and structural explanations for policy-relevant events.

(2005: 147, italics added)

Throughout the wide range of examples of quality research undertaken on networks found across this volume and the wider literature, it is very clear that the range of questions that can be answered through the application of any one of these methods and perhaps, as we note later in this chapter, combinations of methods (as in mixed-methods approaches) can shed light on one of four different clusters of questions framed by Zia, Koliba and Tian (2013):

1 Formation: how are networks formed? Who is included and who is excluded from these networks? What are the goals of these networks and how might they evolve over time?

- 2 Operation: how do networks operate? What type of activities are performed by networks? How do network actors behave? How do different institutional arrangements and socio-economic structures affect the operations of networks?
- 3 Performance and accountability: how do meta-governors manage the performance of networks? How could accountability flows be democratically anchored in networks?
- 4 Sustainability: how are effective networks sustained across spatial and temporal scales? What type of institutional arrangements could be facilitated by meta-governors to enable sustainability of effective and democraticallyanchored networks?

The relationship between networks and collaborations is a close one. Studies have applied theories of collaboration to cohesively bring together different sectors, organizations and social groups (Crosby and Bryson 2010; Selsky and Parker 2005). Although there is no widely accepted theory of collaboration, a range of analytical frameworks exist (e.g. D'Amour et al. 2005; Huxham and Vangen 2005). However, the multitude of frameworks has resulted in a fragmented understanding of the collaborative process (Selsky and Parker 2005). John Bryson, Barbara Crosby and Melissa Middleton Stone (2006) identified the varied processes underpinning key components of collaboration, such as leadership, learning, and conflict management and trust. They define crosssector collaboration as 'the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately' (Bryson, Crosby and Stone 2006: 44). Yet Googins and Rochlin (2000) highlight how processes can be distinctly different for the collaboration of different types of groups, depending on the relationship between the groups and the values of each group.

Although applied collaboration theories have proven successful in facilitating cross-sectoral partnerships (Selsky and Parker 2005), the management of theory and its incorporation in existing practice is not always recognized in frameworks. As previously mentioned, the engagement of theory and practice is one of the core values for connecting practitioners and academic professionals to improve outcomes (Perkmann and Walsh 2008). Robyn Keast and Myrna Mandell (2014) have argued that collaborative ties may be understood as matters of degree. Several typologies for distinguishing differences between types of collaborative relationships have been posited (Gajda 2004; Frey et al. 2006; Keast and Mandell 2014).

Robert Agranoff and Michael McGuire have observed that 'Collaboration is a purposive relationship designed to solve a problem by creating or discovering a solution within a given set of constraints' (2003: 4). The importance of collaborative skills, collaborative processes and collaborative governance strategies for public administrators has been the subject of a great deal of literature, such as Robert Axelrod's application of game theory of cooperative behaviour (1980), Barbara Gray's articulation of collaborative processes (1989), Keast and Mandell's

#### 4 Joris Voets et al.

(2014) distinctions between types of collaborations for social service delivery, the development of collaborative governance (Ansell and Gash 2008) and collaborative governance regimes (Emerson and Nabatchi 2015), even extending into the literature concerning collaborative public management (Bingham and O'Leary 2008).

We acknowledge that the range of questions that can and are being posed by researchers of networks and collaboratives are expansive, and this diversity is also reflected in the various chapters found in this volume. However, as social structures that exist to carry out explicit or implicit functions, these social structures possess lifecycles, exist in time and space, and cannot be divorced from their environments and larger contexts.

Therefore, it is our hope and expectation that this volume may be used by new and established researchers of networks and collaboratives and other multiparty arrangements to consider the relationship between methods and questions. As researchers of networks and collaboratives ourselves, the co-editors of this volume are firm believers in the adage that the questions you pose should drive your selection of methods. As scholars of public administration and public management, whose field has a long history of practitioner engagement, we believe it best to identify those questions that are of greatest concern to those actually managing within and across networks and collaboratives. This is an important point made by John M. Kamensky (Chapter 12) that is worth repeating.

The ubiquity of networks and collaboratives poses particular challenges and opportunities for those looking to study them. This edited collection of chapters by established and early career researchers sets out to address some of these concerns by exposing network/collaboration researchers to a more detailed, critical, yet structured, account of prominent research methods, as well as alert them to some less well-known alternatives. In so doing, this volume equips network/ collaboration researchers with the means and innovations to push the boundaries of exploration and discovery.

### What do we mean by methods in this book?

As the different authors and their chapters will show, we take an open and pluralist position regarding methods and methodologies. Such a diverse position fits the way network and collaboration research has developed over the years: it is not an exclusive domain of a single discipline, and insights rather combine different strands, theories and methods (e.g. Bogason and Zølner 2007; Klijn and Koppenjan 2015; Mandell 2014).

Rather than engaging in deep philosophical debates on research, network researchers are also pragmatists: depending on the type and nature of questions regarding networks and collaboration to be addressed, a requisite methodological mix should be adopted; you should create the methodologic mix that fits your purpose. Although John Gerring (2012) might think differently, we as editors indeed feel that 'we ought to regard (methodological) diversity as a mark of disciplinary maturity rather than as a mark of confusion and disarray' (6). As long as researchers apply methods in a qualitative and transparent way, the knowledge gained is more important than adhering to the same methods other network and collaboration scholars might use – which does not mean there is no merit in doing so if you want to! For example, our philosophy is to do a social network analysis (SNA) if you want to as long as it fits your research question(s), but ensure you do it according to the standards of good SNA research (see Chapter 9 by Lemaire and Raab).

Gerring (2012) defines methods as 'a specific procedure for gathering and/or analysing data' and methodology as 'the tasks, strategies and criteria governing scientific inquiry, including all facets of the research enterprise' (6). Following his definitions, most chapters are focused on methods, but some chapters are closer to methodology. The chapter by Agranoff and Kolpakov (Chapter 2), for instance, is rather an all-encompassing research approach. In Chapter 5 on narrative inquiry by Dodge, Saz-Carranza and Ospina, the authors address this definitional issue, as they explain that narrative inquiry can be considered both method and methodology, with different theoretical traditions which also allow both 'light' and 'strong' applications by researchers. Chapter 7 by Siv Vangen on 'Research Oriented Action Research' (RO-AR) is also closer to methodology than a method in Gerring's terms. But again, rather than getting into the definitional debate about whether these chapters discuss a methodology or method, they are all relevant contributions and therefore considered 'methods' for the purpose of this book. It should be clear, however, that this book does not focus on methods as tools in the narrowest sense - that is, how to do interviews, how to analyse documents, and so forth. Rather, our authors raise critical questions, potentials, challenges and opportunities that exist around each approach. References are provided for those looking to gain stronger 'how to' support for using these approaches at the end of each chapter.

A final point here is that while these methods are mainly discussed in the context of doing research, many – if not all – of these methods can also be regarded as tools, for instance to evaluate networks and collaborations (Robinson et al. 2013). A proper SNA analysis, for instance, can indicate structural holes in the network that need to be filled to achieve better network outcomes, while Vangen's chapter shows an action-oriented strategy to consciously influence the collaborations and networks under study.

### How the book is conceived and organized

We asked a very diverse group of authors to contribute to this volume. We not only mixed age, experience, gender and geographies but also different disciplinary backgrounds. This mix, in our view, not only represents quite well the different research traditions in network and collaboration research out there, but also fits in with the apparent rapprochement between these traditions with other colleagues and which we are actively trying to establish, for instance during joint panels at the annual conferences of the International Research Society of Public Management (IRSPM).

#### 6 Joris Voets et al.

While we had the ambition to capture the whole range of methods used in network and collaboration research, this proves an ideal that is difficult to achieve. While we do have a broad mix of more traditional and more contemporary methods used in network and collaboration research, there is, for instance, no chapter on experiments as a method that seems to have gained popularity in public administration (Grimmelikhuijsen et al. 2017). We also expect that the digital revolution brings new methods to the table that include machine learning, artificial intelligence, and so forth. The chapter by Christopher Koliba, Asim Zia and Scott Merrill (Chapter 11) already points to these potential methodological innovations as well, but it is likely that this trend sparks several separate methodological paths warranting separate chapters (or even volumes) of their own.

This book is organized as follows. Following this introductory chapter, Robert Agranoff and Aleksey Kolpakov demonstrate in Chapter 2 how networks can be researched through a sequential explanatory design. Rather than discussing a single method like most chapters in this book, their chapter demonstrates an overall research design strategy. They discuss how grounded theory has been an essential building block for our current knowledge on networks and collaboration. After a qualitative analysis that helps to develop concepts and a theoretical framework, they turn to quantitative analysis to address their hypotheses. They show how different methods can be mixed sequentially and how important coding the data is. This iterative process has delivered significant results, for instance, how network design issues matter in their case study of the Metro School, a network involving sixteen school districts in central Ohio (Kolpakov, Agranoff and McGuire 2016). Their key lesson for all network and collaboration scholars out there is this:

Years of experience, trial and error, and emerging conceptual coverage has led to the conclusion that a network analysis methodological approach involves a lot of hard and sustained work, a lot more than 'sending out a questionnaire' or 'talking to a few people'. The conceptual rewards, however, are considerable despite such investments.

(Agranoff and Kolpakov, this volume, page 40)

Chapters 3 to 11 are focused more on single methods, although there is some variation in this respect as well. However, to ensure that there is sufficient consistency among these chapters, the following leading questions guided the authors. First, the method is introduced, specifying its origins, main features, relation to other methods and field of origin, and its suitability for studying networks and collaboration. A second dimension addressed is the relevance of the method: why is it relevant for researching collaboration and networks and/or for practitioners and what kinds of research questions, policy and administrative problems are best suited for this method? The third dimension focuses on the application of the method: how is the method applied in empirical research as well as by practitioners? The fourth guiding question relates to analysis: how are the data

analysed, what tools are available, how are the data presented and what analytical challenges exist? A fifth element is the evaluation of the method by the authors: what is the added value and/or what are the strengths of the method and its application in researching networks and collaboration in particular? What are some of the main weaknesses, flaws, limitations? What are main 'lessons' for other researchers who might consider using the method, in terms of the method itself, the research design and the implementation? The final question discussed in the method chapters is the future of the method: what is the potential for this method in future research? How can the method be improved and to what network and collaboration research topics can/should it be applied? How and to what extent can/should this method be combined with others, particularly other methods highlighted in this book? For each method, suggestions for further reading are included: what are sources for more in-depth knowledge on this method (e.g. books, articles, websites, cases, conferences and scholars)? That final, practical point is important as well: we set out to make a state-of-the-art contribution in methods used in collaboration and network research and provide relevant key information following the questions and dimensions previously laid out in this chapter. We do not, however, try and capture each method in every detail - high-quality textbooks on most, if not all, of these single methods are available if you want to apply one or more methods in your research project.

In Chapter 3, Ming Cheng and Joris Voets discuss a foundational method for network and collaboration research, namely, the case method. Based on a limited systematic literature review, they show how the case study method has been used and developed over the years. They also organize the studies in the literature review along different lines that are also drawn from the case study method anthology. In doing so, they demonstrate that network and collaboration research covers all typical types and variations. In terms of underlying research questions and objectives, explanatory, interpretive and critical case studies are all found in the literature. The same goes for the intent of the design and the scale of the case study (intrinsic, instrumental or collective), and the extent to which single or multiple cases are studied taking a holistic or embedded unit of analysis: network and collaboration researchers do it all. They do see a trend that multiple case studies have become more numerous than single case studies in our field - but both are still present today. Cheng and Voets argue that the case study method is key for network and collaboration researchers for two main reasons: the method is very suitable for process tracing (discussed as a separate methodology by Robyn Keast in Chapter 8) and to explore complexity. However, they also point to two well-known challenges in using this method, namely the difficulty to delineate and reproduce a case in practice and the extent to which it leads to generalizable findings. Methodological rigour and moving from single to multiple case study designs can help to deal with these challenges. In terms of contributing to our body of knowledge, case studies included in the literature review have revealed important insights on the informal, dynamic and temporal dimensions of networks and collaboration. Next to arguing for more methodological rigour and more multiple case studies, they also see merit in

more mixed-methods designs – see the second chapter by Agranoff and Kolpakov as one strategy for doing this. Their position is, however, clear: the case study method has not only delivered many significant results so far but will remain a key method for future collaboration and network research as well.

In Chapter 4, the focus shifts to another foundational method in the social sciences, namely, the survey approach. Based on a systematic literature review, Ingmar van Meerkerk, Jurian Edelenbos and Erik-Hans Klijn argue that this method has gained more ground in network and collaboration research in more recent times - notably from 2007 onwards. In this chapter they focus on surveys as the primary source for studying relationships between variables that are directly measured with the survey questionnaire and analysed with statistical methods (excluding SNA, which is dealt with in Chapter 9 by Robin H. Lemaire and Jörg Raab). They show how the survey methodology is used nowadays to develop hypotheses and to refine and extend network theories, for example, on network management (Klijn, Steijn and Edelenbos 2010), although they also find that the decision to use this method is mostly missing in the reviewed articles. Acknowledging that the survey methodology allows one to generalize to a larger population, and advancements in statistical software like structural equation modelling (SEM) allow one to test more complex models, they argue that its use is likely to increase further. The unit of analysis, however, is a key issue: the survey approach is easily applied to study attitudes and behaviours of individuals - like network management activities and styles - but is more challenging if the unit of analysis is the network as a whole. In that case, they argue, other data sources are preferably brought in. In reviewing the literature, the authors identify, discuss and illustrate three sets of factors and outcomes studied with this method. A first set focuses on the impact of managerial behaviour on network performance and trust in the network. A second set studies 'specific relational characteristics between nodes of the network and their impact on performance or learning' (van Meerkerk, Edelenbos and Klijn, this volume, page 71). A third set focuses on structural characteristics of network actors, the network itself and the nature of issues dealt with as factors that affect the level of network activities, collaboration and performance. Two main limitations of the method are also discussed: the lack of detail in the data, not allowing one to take the full case-specific context into consideration, and the rather inflexible nature of the data collection instrument. In relation to the use of the method to study collaboration and networks, some particular issues are also raised, namely the challenge to measure outcomes and the issue of common source bias. In terms of different survey designs, they distinguish two main alternatives: large n-design studies including many networks, and small n-designs focusing on a limited number of networks. They argue that the first strategy is used most in network and collaboration research, but that each strategy has advantages and disadvantages, and that scarcity of resources and access to respondents are part of the trade-off between both. In terms of data analysis, they show that a combination of presenting descriptive statistics, correlation analysis and linear regressions is quite popular, and that more advanced techniques are on the

rise to test multiple relations of models – an argument also expressed by Dan Chamberlain and Ben Farr-Wharton in Chapter 13. To conclude, the authors foresee that the survey method will be used even more in the future (e.g. to do systematic comparative cross-country research and more longitudinal research), but also argue that more mixed-methods designs should be developed.

In Chapter 5, Jennifer Dodge, Angel Saz-Carranza and Sonia M. Ospina delve into narrative inquiry as a research method in studying networks and collaboration. They warn that narrative inquiry can be considered more than 'just another method', as it encompasses a wide range of theoretical frameworks and methodological traditions that have evolved over time, but then focus on the narrative methodological applications to study networks. It is argued that narrative inquiry is used regularly to understand policy networks in general and in European public administration journals in particular. They point to unique insights derived from the use of this method in our field, notably its power to illuminate the subjectivity of network actors, the meanings actors hold about their experience or knowledge as network participants, and how networks can be shaped by powerful narratives or discourses that act as forces shaping what happens in networks and what they do in society. (Dodge, Saz-Carranza and Ospina, this volume, page 82)

The authors discuss the range of narrative traditions and the range of network forms (serendipitous networks, goal-directed networks and metaphorical networks) in the literature. They synthesize this information in twelve possible approaches to study networks empirically using narrative inquiry and focus on the five approaches that are actually used in the literature so far. These approaches are: (1) narrative as language to understand serendipitous networks and (2) narrative as language to understand goal-directed networks, (3) as metaphor to understand serendipitous networks and (4) as metaphor to understand serendipitous networks goal-directed networks, and (5) as a variable to understand metaphorical networks. For each approach, they demonstrate the main features, what insights can be attained, the limitations of each approach and what the future might bring. From this chapter it is clear that narrative inquiry is a promising method that, however, requires potential users to carefully consider which approach fits their research goals and ensure they know the rationales behind them. To do so, this chapter offers an original and broad framework to start from.

To continue on the path of discursive methods, Chapter 6 by Rob Kivits tackles Q methodology. Q methodology's key strength is that it:

allows individual responses to be collated and correlated, so as to extract 'idealized' forms of discourse, latent within the data provided by individuals involved in the study . . . [and] helps to get to the bottom of what people really believe, rather than putting them into boxes. In doing so, the methodology neither tests its participants nor imposes a priori meanings.

(Kivits, this volume, pages 107)

In doing so, it helps to reduce researcher bias and seems to fit the more grounded theory approach quite well. He illustrates that the method is not only relevant for network scholars, but that it can be a tool for practitioners as well. He discusses the example of a stakeholder analysis using Q methodology in the context of airport development to demonstrate how one general group of supporters should have been approached as four different groups of like-minded stakeholders with different motivations, requests, expectations and expected levels of interaction (Kivits and Charles 2015). Kivits also discusses the four stages to do a Q study: concourse establishment, concourse management, Q survey and statistical analysis (and how it differs from R methodology), demonstrating a set of steps that need to be followed rigorously to ensure a relevant outcome and how various software tools (like Leximancer) can help conduct each step. Despite some limitations - like relying on small numbers of people for data and not being able to identify how popular a frame of reference is - he considers it a promising tool that is useful in collaboration and network research. Like other authors in this volume, he also argues in favour of a multi-method strategy - in this case, combining discourse analysis and Q methodology.

In Chapter 7, Siv Vangen discusses 'Research Oriented Action Research' (RO-AR), which she defines as 'a phenomenological action research methodology developed by Colin Eden and Chris Huxham (1996, 2006)' (Vangen, this volume, page 126). In this sense, it is not simply a method and is closer to the type of contribution of Agranoff and Kolpakov in the second chapter. RO-AR is also strongly linked to a research program and the theory of collaborative advantage (Huxham and Vangen 2005), and is a particular form of action research. Being rooted in the context of inter-organizational collaboration, Vangen argues that RO-AR is particularly suitable for 'developing contextualized theory that relates closely to practice' (Vangen, this volume, page 128) in which the interventions of the researcher and the extent to which these actually meet collaborative or network needs, are a key feature of the methodology. Interestingly, this chapter shows the interrelations between theory, method and practice through practical transformation. In terms of theory building, it fits the grounded theory approach which Agranoff and Kolpakov discuss (Chapter 2) and the narrative analysis approach that Dodge et al. (Chapter 5) refer to as well. In this case, themes like goals, culture and leadership are developed from the bottom up and interventions to improve these themes in the cases under study are developed. Vangen illustrates the methodology using quite different cases, describing the process of an intervention and different steps taken to prepare and execute it. In doing so, potential links with other methods in this book become apparent cognitively mapping members' values, beliefs and goals might be linked to the Q methodology as discussed by Kivits in Chapter 6. Vangen argues that RO-AR is a type of ethnography that relies primarily on naturally occurring data and uses interviews, focus groups and questionnaires, with a key principle to capture data as accurately as possible. In terms of conceptual development based on RO-AR, Vangen also defines five steps as part of an iterative cycle. Two main challenges that RO-AR faces are also discussed by Cheng and Voets in Chapter 3 on the