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ISBN: 9789463617741
Cover and layout: Wiebke Keck (persoonlijkproefschrift.nl)
Printing: Optima Grafische Communicatie

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Proefschrift

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof.dr.ir. H. Bijl,
volgens besluit van het College voor Promoties
te verdedigen op donderdag 9 maart 2023
klokke 16.15 uur

door

Maria Ada van der Hoek
geboren te Rotterdam
in 1992

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Acknowledgements

These last words to write are the most personal. I have experienced the past six years as the biggest challenge thus far, and I am delighted with the result in front of you. I could not have accomplished this without the help and support of my colleagues, friends, and family: I feel grateful for your company along the way.

First I would like to thank my supervisors, who have guided and encouraged me in my academic development. Sandra, you invited me into the world of academic research and have stimulated me to pursue my interests throughout my research projects. I have benefited enormously from the advice and opportunities you have given me. I am grateful for how you have supported me during the bright and tough times: your personal attention and commitment mean a lot to me. Thank you for your inspiration and kindness. Maarja, I have enjoyed and benefited from your perspective and attitude – regarding my research and teaching as well as organizational life. With your complementary expertise and pragmatic approach, you have kept me sharp and stimulated me to not worry before it's necessary. Thank you for challenging me and helping me find solutions. Ben, since you joined my supervising team halfway through my project, you have been a great support to keep me going. Our unstructured brainstorming and thinking-out-loud conversations have helped me to just talk about some ideas before I had thought it all through. Discussing my concerns and considerations with you have helped me to make decisions and stick with them – thank you.

This dissertation would not have been possible without participants in my research projects. I would like to thank all interview participants for sharing their stories with me. Also thanks to the survey participants of Flitspanel and Catharina Kolar of InternetSpiegel for your help in the survey process.

I am happy to have been surrounded by a group of bright, helpful, and fun colleagues at the Institute of Public Administration. I have enjoyed our many conversations – serious and informal, during seminars, lunch breaks, or at the Plein – and could always count on your help and advice. In particular, I want to mention Tanachia, Petra, Joris, Fia, Lynn, Carola, Dovilè, Johan, Valérie, Kees, Lara, Moniek, Emily, Hugo, Samir, Johan Jan, Natascha, Stefanie, Chantal, Oke – and many others.

Special thanks to a group of former PhD colleagues – the 'oude garde' – who became friends: Machiel, Daniëlle, Mark, Linda, Jeroen, Wout. I look back at our drinks, dinners, and other social gatherings with great joy. Also special thanks to Nadine, for our long, constructive, philosophical, and personal talks. In person, but definitely also when we could only meet in Teams.

I want to thank my former officemates and paranymphs separately. Bernard, thank you for your patience – you had to endure my temper the most. I feel lucky to have had you as a colleague, friend, and now paranymph by my side. Eduard, thank you for sharing your enthusiasm and bad jokes. Your positive attitude and hospitality are admirable, many highlights of the past years happened thanks to you. Annelieke, thank you for keeping me in some kind of rhythm throughout a couple of tough years. Our daily talks about work, but also about personal issues and our theatre visits, have meant a lot to me.

Also outside of work I could rely on the support of people who showed me the power of friendship – I want to thank you. Merlijn, for your dedication and honesty as a friend. I can always trust that you are genuine in both your happiness for me and your words of advice. Manou, I could not have found a better friend at a better time. I really appreciate that I can discuss anything with you and that we have so many common interests. Troca schatjes and JC Croquant, for all fun get-togethers to distract me from my PhD. Linda and Aukje, for our walks, conversations, and your inspiring societal engagement. Ilse and Veerle, for being there for me and sharing a home.

Lastly, I wish to express my gratitude to my family. You were, are, and always will be there for me (also when you are not admitted into a building). Rob and Willem Jaap, and Lotte as well, even though we are very different and we do not always agree, I enjoy the sense of humour we share as siblings. Thank you for reminding me of other ways of thinking and doing things. Pap and mam, you support me in my choices and have taken care of me in the best way anyone could imagine. Thank you for giving me a home, anytime. I hope I can follow your example of being so generous and loving, and of enjoying life.

Marieke van der Hoek
Den Haag, January 2023

Chapter 1

Introduction

Francis is a public manager in a Dutch municipality. She is responsible for the transition in the built and green environment: a broad ambition that spans policy domains related to housing, sustainability, green spaces, water, and mobility. In this position, she works together with a variety of stakeholders and performs different kinds of activities. She coordinates and cooperates with line managers of departments that are traditionally organized around policy areas and expertise. Francis collects input and stimulates discussion to formulate priorities and ways of working. Hereby she involves these partners, as well as the political principals and societal actors. She makes decisions collaboratively and strives to clearly communicate the ambitions and priorities within the organization. In her role, she also keeps track of progress and decides about changing priorities and discontinuing activities. Scanning the environment for opportunities gives her more information and building partnerships with other municipalities or businesses can contribute to the central ambition. Moreover, she facilitates her team members to learn about and try new ways of working to establish a working environment open to learning. Managing expectations about flexibility and stimulating experimenting with new approaches are part of her work.[1]

1.1 Leadership in public organizations: Manoeuvring in a challenging context

At first glance, Francis seems just like a busy public manager; but appearances can be deceptive. Just take a moment to wonder: How does she deal with those different stakeholders with their own interests that are not always aligned? How does she cope with the organizational structures and environment that complicate her room for manoeuvre? This exercise illustrates that engaging in leadership in public organizations is full of challenges and requires a repertoire of behavioural

options. The example of Francis, therefore, puts forward a pressing question for public management: How do leadership behaviour repertoires take shape in public organizations?

Fresh attention for this topic is needed because widespread developments in organizing affect how leadership is embedded and takes shape in public organizations. Traditionally, the bureaucratic form of organizing has been dominant in structuring work and relationships (Groeneveld & Van de Walle, 2011; van der Voet & Steijn, 2021). Typically, bureaucracy provides clear means of control and explicit lines of command, describing which tasks can be done by whom, with which means, and on the basis of which authority. Hierarchy offers a strict coordinating mechanism that couples formal positions with clear role expectations, responsibilities, and authority and also ensures unity of command. Leadership is embedded in this structure and arranged through the hierarchical structure. Managers are formally expected to take up leadership roles and are granted responsibilities and authority to enact this leadership (Hansen & Villadsen, 2010; Mintzberg, 1979; Rainey, 2014). Nowadays, however, this bureaucratic structure is not the only guide for arranging leadership. In contrast, multiple overlapping forms of organizing characterize public organizations, which complicate practicing leadership.

New perspectives on how to organize aimed to overcome some challenges of the bureaucracy in creating value for the public. While these perspectives represent broad paradigms about the public sector, they also involve ideas affecting the organization of leadership. New Public Management's philosophy of 'run government like a business' aimed to address the rigidity of bureaucratic structures and a lack of attention for results (Diefenbach, 2009; Hood, 1991). Two opposing trends connected to this perspective can be distinguished. Decentralization and devolvement of formal decision-making authority and responsibilities towards lower levels aimed to strengthen a results orientation and to 'let managers manage'. Lower level managers and organizational members gained new responsibilities and sometimes also formal competencies. Simultaneously, however, the bureaucracy and the position of formal managers were reinforced by an increasing focus on managerial logic and accompanying pressure for accountability to central management (Bess & Goldman, 2001; Diefenbach, 2009; Lawton et al., 2000). The blurring of traditional hierarchical lines of authority while managers became more central in leadership created more complex structures.

Moving away from managerialism to emphasize responsiveness, ideas of New Public Governance affected organizing and leadership. This perspective highlights that policy issues in the public sector often require multiple agencies and actors to cooperate to create public value (Crosby & Bryson, 2005; Osborne, 2006). What we see in practice is that specialists spread over various organizations increasingly work together across boundaries of teams, units, and organizations. Such collaborative governance constellations are a common part of organizing, running parallel to the bureaucratic structures existing in individual organizations. The hierarchical coordination of work and relationships does not necessarily apply to such parallel structures, so that a gap between existing structures of bureaucracy and the realities of cooperation emerges (Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011).

The straightforwardness of the hierarchy in designating who is responsible for leadership faded with the introduction of complementary parallel structures and a shift towards 'boundaryless' and post-bureaucratic forms of organizing (Groeneveld & Van de Walle, 2011; Shamir, 1999; van der Voet & Steijn, 2021). Formerly, the hierarchy used to function as the automatic mechanism imparting clear responsibilities through formal positions and allocating leadership roles top-down following a logic of unity of command. Following the addition of new forms of organizing, the line of command becomes more complicated and/or unity of command is disrupted. Accordingly, leadership roles become partially decoupled from specified formal managerial positions in the hierarchy and more differentiation can be observed. This blurs the divide between those who lead and those who follow (Gronn, 2002; Shamir, 1999) while leaving voids and creating space for ambiguity in how leadership takes shape.

Consequently, this means that space emerges for other organizational members to play a role in organizational leadership. On the one hand, such space is created in an alternative form of top-down allocation. Some aspects of leadership are reorganized and assigned to organizational members outside the hierarchical line of formal authority by creating new types of managerial positions. Such managers have substantive responsibilities for specified goals or programmes, but it is not uncommon that they have to operate without traditional formal authority over personnel and resources from a hierarchical position. The introduction of such positions means that unity of command is disrupted and elements of distributed leadership appear (Mintzberg, 1979; Gronn, 2002). On the other hand, individuals gain more freedom to take up leadership roles and engage in leadership behaviour,

because hierarchies dictate less who can take up those roles and ambiguity in structures leaves room for manoeuvre. The combination of several layers of organizing and various types of structures provide opportunities to participate in leadership outside of formal structures, open to individual initiative (Gronn, 2002; Tian et al., 2016; Woods et al., 2004). Though formal positions may still impart responsibilities and role expectations more explicitly to hierarchical managers than to other organizational members, positions are not the only source providing responsibilities and role conceptions.

The developments in the changed role of hierarchy to coordinate work and relationships and the partial decoupling of leadership from formal structures like positions, create new challenges for leadership. In order for leadership to materialize, the emphasis shifts from the structural dimension of leadership to the behavioural dimension. As leadership becomes less bound by commanding structures, it becomes more dependent on individuals' behaviour and more is requested of organizational members in enacting leadership. Therefore, it is important to learn more about leadership behaviour and under which conditions it comes about. This dissertation examines these issues.

1.2 Literature: Knowledge and gaps

For good understanding, it is necessary to define leadership. The literature on leadership does not offer consensus on a single definition, but common elements are that it is described as an influence process with an interpersonal and goal-oriented character. This research adopts Yukl's (2008) definition, understanding leadership as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives" (Yukl, 2008, p.8). This definition is useful as it offers a lens to study leadership in light of the sketched developments. Firstly, it is open to application to a broad range of organizational members, regardless of formal position in the organizational hierarchy. Furthermore, this definition enables a focus on leadership behaviour as constitutive of the process that can span a variety behaviours in relation to various stakeholders.

Though conceptual consensus is absent, generations of scholars have studied leadership from a variety of disciplinary backgrounds and with diverse perspectives on what leadership is and how it can be studied. What can we learn from this prior

work? Characteristic for the study of leadership is that leadership is in the majority of studies treated as explanation for outcomes. Typical are studies that aim to assess how leadership influences performance of organizations, teams, and individuals (e.g., Andersen et al., 2018; Bellé, 2014; Vermeeren et al., 2014); group processes such as cooperation, cohesion, and self-management (e.g., Oberfield, 2014b; van der Voet & Steijn, 2021); employee attitudes like job satisfaction, work motivation, and organizational commitment (e.g., Bronkhorst et al., 2015); experiences of uncertainty and goal, task, and role ambiguity and conflict (e.g., Bernards, 2021; Staniok, 2016); and outcomes like sickness absence and turnover (e.g., Jakobsen et al., 2021). Thereby leadership is often treated as a motivational factor in a dyadic, top-down relationship: managers and supervisors do things that their direct reports perceive and respond to with additional or more effective efforts and that increase their well-being. In particular, transformational and transactional leadership are often topic of research (Vogel & Masal, 2015), but also inclusive (e.g., Ashikali et al., 2021) and ethical (e.g., Hassan et al., 2014; Heres & Lasthuizen, 2012) leadership as well as leadership for public value (e.g., Hartley et al., 2019) draw attention of public management scholars. This research has taught us that leadership by managers affects the attitudes and behaviours of public employees, and is a valuable factor for public value creation.

While understanding what leadership can contribute is valuable knowledge, several limitations can be pointed out that are important to acknowledge in light of the sketched developments. Firstly, understanding how leadership comes about, what determines that managers adopt effective strategies, and possibly how it can be steered towards those effective forms is largely unknown. So far, there has been only limited attention for how context shapes leadership and managerial behaviour (George, Van de Walle et al., 2019; Hansen & Villadsen, 2010; Nielsen & Cleal, 2011; Schmidt & Groeneveld, 2021; Stoker et al., 2019), though the importance of such research has been widely argued by many scholars in the public and generic management fields (Bryman & Lilley, 2009; Day, 2014; Osborn et al., 2014; Ospina, 2017; O'Toole & Meier, 2015; Porter & McLaughlin, 2006; Vandenabeele et al., 2014; Vogel & Masal, 2015; Wright, 2015). Understanding under which conditions leaders behave differently is necessary to apply insights about how leadership influences various outcomes more effectively. Given the complex and dynamic nature of the demands on leadership, it is relevant to examine how they respond to and balance in light of those demands. Including factors from the context as explanations for leadership behaviour and accounting for situational within-person variation can facilitate this effort.

Secondly, research tends to adopt a conception of leadership that is limited to motivating subordinates and situated in downward dyadic supervisor–employee relationships. This has two problems: this focus does not cover the varied repertoire of behaviours used in practice to address intertwined issues (Head, 2010) and it does not relate to the 360-degree nature of leadership, that also entails upward, sideward, and outward (Moore, 1995; van den Bekerom et al., 2016) influencing and facilitating. The current focus oversimplifies the challenges for leadership in practice, since leadership does not stop with motivating employees in order to tackle issues of a whole department, long term issues, or issues emerging in cross-boundary collaboration. Additionally, when leadership is partially disconnected from hierarchical positions, it is essential to go beyond these narrow conceptions, since it can be thought that formal position makes some types of behaviour and leadership behaviour in relation to some types of actors more or less likely. In order to advance theorizing on leadership more in line with the complex challenges that leaders face day to day, a more encompassing conceptualization is warranted.

Thirdly, the literature teaches us a lot about the leadership behaviour and styles of managers and supervisors in formal leadership positions. Managers, however, are not the only actors that are involved anymore and this narrow focus does not match the challenges of broader participation in leadership throughout organizations. A gap exists regarding leadership by other organizational members. More recently, calls for collective and distributed perspectives on leadership are taken up (Jakobsen et al., 2021; Kjeldsen, 2019; Kjeldsen & van der Voet, 2021; Ospina, 2017). Research on distributed leadership, often in the context of schools or health care, and shared leadership among team members starts to become more common. What we know less about is under which circumstances organizational members are willing and able to take up a leadership role and participate in organizational leadership by engaging in leadership behaviour. To answer new questions about the challenges for leadership in public organizations, steps should be taken to broaden the perspective on who engages in leadership and how leadership as a distributed phenomenon takes shape.

Finally, choices about types of research design and methods could be further diversified to facilitate the study of these substantive questions. Experiments are increasingly common in the public management literature (Andersen et al., 2017; Bouwman & Grimmelikhuijsen, 2016). While these methods have strengths in terms of internal validity and assessing causal relationships, it is known that ecological and external validity are often low. Context is generally treated as disturbance and researchers aim to keep context variables stable by designing

them out of their studies. As a result, explicit substantive attention for context within experimental studies is uncommon. This means that progress to explain leadership behaviour as dependent on context is still limited. Another way in which methods may offer opportunities for studying the questions raised above relates to how leadership behaviour is measured in survey research. Common practice is to assess leadership behaviour based on ratings provided by others (usually subordinates or supervisors). Whereas asking others to evaluate leadership by the focal person lowers the risks of social desirability and self-serving bias (Vogel & Kroll, 2019), it also removes potentially relevant information from the data. On the one hand, others may have only partial view of the focal person's activities and leadership behaviour as to possibly limit what is taken into account. For instance, a subordinate may not be aware of leadership behaviour used in relationships in upward and outward directions. On the other hand, the intentions behind the leadership behaviour are not factored into such reports. Since leadership is defined as goal oriented, the intentional element is relevant information. Though a discrepancy between intended, actual, and perceived behaviour is real (Jacobsen & Andersen, 2015; Kjeldsen & Andersen, 2021; Vogel & Kroll, 2019), insight in the intended behaviour can serve a purpose in particular when trying to explain why leadership behaviour is used in a certain way. Self-reported data provide a means to get those insight, but are largely denounced in the standing literature (Banks et al., 2021). Various uncommon methodological choices could help to address the substantive gaps in the literature identified here.

These observations are similar for the public and generic management literature on leadership. While this research departs from the perspective of public organizations and developments in a public sector context, it builds on and applies insights from both the public management literature and from the broader management and organization science fields. Although no consensus exists about the question if public organizations are significantly distinct from private organizations (e.g., Andersen, 2010; Kuipers & Vermeeren, 2013; Perry et al., 2006), we can learn from and build on work in the broader field of management and organization studies (Andrews & Esteve, 2015; Vandenabeele et al., 2014).

In sum, the insights about leadership are plentiful and rich, yet several gaps in the literature exist. Developments in the public sector impacting how leadership is organized and can be realized in public organizations prompt new questions, which the current literature is unable to answer thus far. To overcome this limitation, we need to come to a different understanding of leadership that matches the challenges

for leadership in public organizations characterized by parallel and overlapping forms of organizing and that is suitable to explain leadership behaviour in such circumstances. This requires a conceptualization that pays attention to the variety that characterizes leadership behaviour and participation by various types of organizational members and is open to differentiation between individuals as well as between situations. Consequently, questions regarding the conditions under which leadership comes about can be examined.

1.3 Research aims and questions

To address the identified issues, this dissertation aims to understand and explain leadership behaviour repertoires in public organizations. It explores individual experiences and develops a repertoire perspective on leadership behaviour to build an understanding of leadership that fits with changes in organizing. It also tests hypotheses on leadership behaviour in light of characteristics of the public organizational context to explain the manifestation of leadership behaviour repertoires. To accomplish those aims, a central research question guides the studies that underlie this dissertation:

How do leadership behaviour repertoires take shape in public organizations?

This overarching question will be answered in the final chapter of this dissertation on the basis of several building blocks. In each chapter, a sub-question is addressed to build the argumentation. In Chapter 2, the conceptual work that develops a repertoire perspective on leadership behaviour is presented. This is guided by the question: *How can leadership in an ambiguous context be conceptualized as a behaviour repertoire?* Whereas this chapter contributes to this dissertation's aim to understand leadership behaviour repertoires, the other chapters focus on the aim to explain. In two steps, an answer is provided to the second sub-question: *To what extent can aspects of the public organization context explain the use of leadership behaviour repertoires?* Focusing on within-person behavioural adaptation, Chapter 3 investigates how situational ambiguity has an effect on variety in leadership behaviour repertoire use. A different test of the relationship between context and leadership behaviour is presented in Chapter 4. Differentiating explicitly between formal managers and non-managerial employees, this study evaluates the role of

bureaucratic structure and environmental complexity in explaining how active individuals with and without formal leadership positions are in using leadership behaviours from the repertoire. Chapter 5 zooms in on leadership participation by organizational members without formal leadership positions, who are increasingly involved in leadership. To get insight in why they would engage in leadership, this study asks: *To what extent can the use of leadership behaviour repertoires by non-managerial employees in public organizations be explained by leadership identity and formal leadership experience?*

1.4 Methodology

To understand and explain leadership behaviour repertoires in public organizations, empirical research was conducted in three phases of data collection. The separate studies were designed to complement each other in order to address the two different research aims and to answer different types of questions. Therefore, several approaches were combined that vary in design and research methods. Still, the separate studies built on each other, by using findings of earlier rounds of data collection to inform design decisions about the next round. Moreover, each study included the university sector as a red thread in empirical settings. In two studies, three other public sectors were added to collect evidence that permits more robust conclusions. Given the diversity of methods combined with explicit connections between the studies, the project as a whole could be seen as mixed-methods research. The discussion below sets out which design choices were made, in which setting the research was conducted, what type of participants were involved and how they were sampled, and which methods for data collection were used.

The first research aim, understanding leadership behaviour repertoires, is best served by an exploratory design and methods for qualitative data collection to generate rich accounts of leadership in the field. As empirical setting, a typical case in terms of ambiguity and complexity – in line with the illustrating example – was chosen. These contextual characteristics highlight the need for a varied repertoire of leadership behaviours to be able to address competing demands and as such is an interesting and insightful setting in light of the challenges for leadership. The university sector is known to be characterized by ambiguity of goals, tasks, and stakeholders (Bryman & Lilley, 2009; Cohen & March, 1974; Enders, 2012; March &

Olsen, 1979). Moreover, organizational structures are complex and formal authority is not always strong for leaders. The governance structure with its rotating primus inter pares system of leadership positions creates leadership challenges in line with the sketched developments: positions, roles, and authority are not straightforwardly coupled (Beerkens & van der Hoek, 2022; Bess & Goldman, 2001; Bolden et al., 2009; Pearce et al., 2018; Seeber et al., 2015). Accounts that can provide a view of leadership as behaviour repertoire were collected from a sample of leaders in formal leadership positions in Dutch universities – (vice) deans, directors, board members; and chairs or coordinators of groups and programmes – since their positions carry expectations and requirements in terms of leadership. Participants were purposively sampled to include a variety of positions, disciplinary backgrounds, and gender to capture variety in experiences. Using semi-structured in-depth interviewing as method for data collection, participants can be asked to share their experiences and considerations, drawing on examples and elaborating when necessary to improve understanding. Since sense-making of one's situation is an important part of how people interact with the world around them (James & Jones, 1974; Weick et al., 2005), generating such rich accounts can feed the development of a conceptualization of leadership that matches the new challenges and circumstances for leadership in public organizations. A hybrid approach to data analysis was used to combine the benefits of sensitizing concepts and freedom for ideas emerging from the data.

The second research aim, explaining leadership behaviour repertoires, requires different design choices. Building on the conceptual work of the first study presented in Chapter 2, the other empirical studies were deductive and concerned testing hypotheses on causes of leadership behaviour. Explanations at the level of situations, the organizational context, and the individual are included. To examine these different types of explanations, different research designs and methods were used. Drawing on both experimental and observational survey data complement each other, which helps to draw more robust conclusions.

The study in Chapter 3 is based on a mixed-methods design that combines a within-person vignette experiment with interview data collection. The vignette experiment allowed for controlled hypothesis testing of causal relationships (Aguinis & Bradley, 2014; Atzmüller & Steiner, 2010), while the interview data collection procedure provided an additional layer of insights to interpret those findings (Barter & Renold, 1999; Jenkins et al., 2010). The vignettes provide the possibility to manipulate context factors of interest in concrete scenarios. This

allows for examining variation between situations and how the same person adapts her behaviour. Building on the findings of the first study, this research was conducted in the university sector in the Netherlands. Using an "actual derived cases" approach (Shepherd & Zacharakis, 1999), accounts of interview participants in that previous study were used to develop scenarios that were realistic and relevant for the vignette participants. As participants, acting chairs, directors, and board members in formal leadership positions were sampled again. Such participants could be expected to have experience with situations similar to the scenarios, which makes the task of stepping into the shoes of the scenario's protagonist easier and, accordingly, the responses more plausible. The realism in the scenarios as well as in the responses benefits the study's internal and external validity (Aguinis & Bradley, 2014; Barter & Renold, 1999; Shepherd & Zacharakis, 1999). By confining the experiment to one sector, the scenarios could refer to specific types of dilemmas tailored to the experiences of participants while other types of context variation were kept constant. In this study, all participants responded to the total set of vignettes, which facilitated a test of within-person variation, in other words: it could be tested if the same person would adapt her behaviour under different conditions.

The studies of Chapter 4 and Chapter 5 are based on a survey that was conducted using an online questionnaire. This design made it possible to collect data on a large number of organizational members to test hypotheses. Moreover, a large number of concepts could be measured, so that the data could be used to examine two research questions. On the one hand, variation at the organizational context level could be analysed as well as how different types of organizational members perceive and behave in light of that context. On the other hand, individual characteristics could be measured to test individual level explanations of leadership behaviour. The sample consisted of participants employed in various public sectors. The university sector was maintained, to keep a constant between the different studies. Three other sectors were added to expand the examination and see if patterns would translate. These additional sectors were selected to generate variety in organizational contexts and assumedly variety in participants' experiences. The sample included both managers with formal leadership positions and non-managerial organizational members. This offered the opportunity to analyse differences between these groups in terms of leadership behaviour as well as how they perceive their context.

All studies make use of self-reports on leadership behaviour. This is useful in order to understand leadership from the perspective of the person engaging in leadership. How she experiences competing demands and intends to respond to context depend on that individual's interpretation. Tapping this interpretation through self-provided accounts can improve our conceptualization of leadership behaviour, since it stays closer to lived experiences and is open to variety from the perspective of leaders. Furthermore, asking those engaged in leadership themselves has the advantage of tapping a range of behaviours in relation to various stakeholders, of which parts may go unnoticed by others due to being around only part of the time. In light of the questions this dissertation addresses, such data can provide valuable insights.

1.5 Relevance

Through this empirical research, several contributions to the literature and practice are made. On a theoretical level, this dissertation aims to address the limited conceptualization of leadership common in the literature. Re-evaluation and elaboration of how we understand and study our core concepts is important, since concepts are the building blocks of theory. By developing a comprehensive conceptualization of leadership behaviour as repertoire, a potential avenue to match scientific inquiry more closely to the realities of public management in practice is presented. Another expansion of scope is proposed in this dissertation, by broadening the focus of who engages in leadership behaviour. As a more diverse set of organizational members play a role in organizational leadership, research that includes other individuals than formal leaders only can help to answer new questions. It thereby contributes insights to the discussion on distributed forms of leadership in public management.

This dissertation also contributes to the advancement of theorizing on leadership in public management by redirecting the theoretical focus to leadership as outcome. In particular, effects of contextual factors in public organizations are tested to explain leadership behaviour. While attention for context is common in public management research, limited steps have been taken to assess how the organizational context shapes leadership behaviour itself. Unlike contingency theory or best fit approaches, this is not about finding the 'recipe' that is most effective in particular circumstances. Rather, the contribution of building such

knowledge lies in understanding conditions that influence behaviour. This would complement the extensive knowledge on the effects of leadership. Adding this part could help to make better use of insights of how leadership can add value.

Methodologically, this research highlights the relevance and utility of mixed methods and within-person designs. One of the empirical studies of this dissertation is based on a novel combination of experimental and in-depth qualitative methods. The use of experimental designs is becoming more common in public management research already, but the contextual element has been largely neglected. By drawing on in-depth data to develop the experimental treatments, realism can be boosted to benefit ecological validity. Although Bouwman and Grimmelikhuijsen (2016) conclude from their review of experimental studies that public administration scholars make design choices that pay attention to experimental realism and external validity, Bertelli and Riccucci (2022) argue that more resemblance in experiments to what matters for public managers and professionals in practice is necessary for meaningful contributions. The "actual derived cases" approach (Shepherd & Zacharakis, 1999) ensures that the manipulations in the experiment involve situations that reflect familiar, ongoing, and important issues that participants deal with in their daily practice. Coupling the experimental treatment with a qualitative procedure of data collection adds a layer of in-depth elaboration to interpret the statistical analysis. This further increases the realism in the data and facilitates connecting experimental results to discussions in the literature and in the field. This mixed methods approach combines strengths to have enhanced understanding of the phenomenon of interest.

Moreover, the utility of a within-person design is demonstrated with this research. The majority of research employs between-person designs, also in experimental studies (Bouwman & Grimmelikhuijsen; cf. Raaphorst et al., 2018). For research questions that focus on how individuals respond and act differently under varying conditions, however, different choices are more relevant. When one is interested in contextual characteristics that can vary between decision-making situations throughout a day, it is necessary to extract existing variety with suitable designs. Cross-sectional designs tap general patterns of individuals, which tend to obscure existing variety, and between-person experiments only capture a response to a single conditions, which does not provide a direct test for adaptation of behaviour to context. On the other hand, by exposing the participant to different conditions, within-person designs can be used to test behavioural adaptation in a direct manner. While this dissertation focuses on how leadership behaviour takes

shape, other types of questions that concern conditionality of behaviour can be served by a within-person design.

Also from a practical point of view, lessons can be drawn from this dissertation. The repertoire perspective on leadership behaviour provides a source for reflection for individuals taking up leadership roles, both with and without formal leadership positions. Being aware that one could use different types of behaviour and that leadership behaviour could be used in relationships in different directions is a first step. Next, reflection on preferred, default combinations as well options that one is less experienced, and under which circumstances these patterns are more common, could be useful to identify opportunities for further growth. Moreover, the results reveal some barriers and opportunities for engagement in leadership. For organizational members active in leadership, this could serve to reflect on how they act in different circumstances. It is also relevant for management to be aware of when changes in organizational structure, division of tasks and responsibilities, or new institutional collaborations are designed. The role of structural, situational, and environmental conditions, as well as individual motivations and skills, could be taken into account to design effective arrangements as well as to have constructive and ongoing discussions. Lastly, public organizations can derive stepping stones for leadership development from this research.

1.6 Outline dissertation

This chapter has outlined that organizational trends in the public sector create new questions about leadership, which the current literature cannot fully answer, and how this dissertation aims to contribute to this puzzle. The next chapters build an argument in several steps.

Firstly, Chapter 2 conceptualizes leadership behaviour as a repertoire to facilitate the understanding of the phenomenon in an encompassing way. By studying leadership behaviour from a repertoire perspective, the realities of leadership as combining and balancing a range of actions are better matched by measurement. Moreover, it is possible to observe variations, which is done in various ways in the subsequent chapters. This is particularly important if we want to understand the challenges for leadership in complex organizations that increasingly encompass collaborative arrangements for the creation of public value, which involves a broader range of organizational members in leadership.

Thereafter, Chapter 3 reports on a study that investigates how leadership behaviour takes shape in relation to context by zooming in on ambiguity that varies between situations. This study shows that the same person adapts her behaviour between situations with different levels of ambiguity in the presented challenges. When ambiguity is higher, it seems that leaders draw on a more narrow share of their repertoire by using fewer different types of leadership behaviour. This study also points at the important role of factors connected to the structure of organizations, since formal authority enables the use of a broader range of the repertoire.

Next, Chapter 4 follows up on these indications and relates a study that assesses how bureaucratic structure and environmental complexity affect engagement in leadership behaviour. The analyses include an explicit comparison between organizational members with and without formal leadership positions to shed more light on the issue of increasing calls for broad participation in leadership throughout organizations. It shows that both formal managers and non-managerial employees employ various leadership behaviours from the repertoire, but the former are more active in all respects. Moreover, non-managerial employees seem to encounter more bureaucratic barriers from formalization and distribution of competences and responsibilities to participate in some types of leadership behaviour. Since the analyses also show that both groups are more active in leadership when environmental complexity is higher, it offers perspective for moves towards more collective and distributed forms of leadership.

Building on the previous step, Chapter 5 presents a study that focuses on leadership behaviour of non-managerial employees without formal leadership positions. In contrast to the standing literature on leadership that studies leadership behaviour of managers, this research zooms in on a group of public servants that are increasingly involved in leadership tasks, but have primarily been considered as followers of managers. Seeing yourself as a leader, however, makes engagement in leadership more likely – an expectation supported by this study. At an individual level, such organizational members can differ in the extent to which they identify with a leadership role, for example because of previous working experience in managerial positions. This study adds to the literature that identity theory and concepts provide a useful lens to understand leadership behaviour of non-managerial public employees.

Finally, Chapter 6 presents the overall conclusions and discussion of this dissertation. The findings of the preceding empirical chapters are brought together

to answer the research question. The subsequent discussion relates theoretical, methodological, and practical implications. Furthermore, attention is paid to avenues for future research as well as limitations of this research. The chapter closes with some final thoughts about the themes of this dissertation.

Notes

1. This example is inspired by an interview with two public managers in Dutch municipalities after publication of the booklet *Opgavegericht werken* [Challenge based working] by the Association of Programme Management in Dutch Municipalities (VPNG) (van der Heijden & Kraijo, 2020; VPNG, 2021).

Chapter 2

Leadership behaviour repertoire: An exploratory study of the concept and its potential for understanding leadership in public organizations

Abstract

Rapidly accumulating literature on public leadership tends to zoom in on specific aspects of leaders' behaviour. Such a fragmented approach may overlook the most challenging aspect of effective leadership: combining diverse behaviours in relation to various stakeholders to match contextual needs. This article therefore argues for a comprehensive approach that recognizes the behavioural complexity of most contemporary leaders, particularly in ambiguous contexts. The concept of leadership behaviour repertoire facilitates this. The article conceptualizes the perspective of the leadership behaviour repertoire and illustrates in which ways leaders combine behavioural options from their repertoire using data from in-depth interviews with public leaders. Based on our findings, we propose integration of this perspective into the field's research agenda to make our understanding of leadership in public organizations more complete. Moreover, the repertoire perspective can challenge and advance theorizing of leadership in relation to its context and outcomes in a more comprehensive way.

van der Hoek, M., Groeneveld, S., & Beerkens, M. (2021). Leadership behavior repertoire: An exploratory study of the concept and its potential for understanding leadership in public organizations. *Perspectives on Public Management and Governance, 4*(4), 363-378.

2.1 Introduction

Academic interest in leadership has been growing rapidly in the last few decades. Public management scholars, too, dedicate an increasing amount of attention to leadership in public organizations (Vandenabeele et al., 2014; Van Wart, 2013; Vogel & Masal, 2015). Research focused on the individual level of analysis, studying leadership behaviour of public managers at various organizational levels, has taken flight. Studying leadership at this individual level is valuable to grasp processes underlying policy making and implementation, taking shape in public organizations. A large share of research in this tradition focusses on "leadership in organizations" (Dubin, 1979; Hunt & Ropo, 1995), referring to leadership as supervising individual employees. Rich literature on transformational and transactional leadership, for example, primarily examines the downward supervisory relationship of managers motivating employees (Ospina, 2017; Vandenabeele et al., 2014; Vogel & Masal, 2015). "Leadership of organizations" (Dubin, 1979; Hunt & Ropo, 1995), on the other hand, looks at a leadership role in handling issues at the level of the organization or unit in relation to internal and external stakeholders. Middle managers typically are expected to perform a variety of roles simultaneously, yet the literature in public management tends to ignore this variety and to compartmentalize leadership into isolated roles.

In this article, we argue that research on leadership behaviour at the individual level in public organizations could be advanced by looking not only deeper into dyadic manager–employee leadership behaviour, but also by adopting a broader conceptualization spanning a more varied range of behaviours and their interactions with each other. Leaders probably do not perceive the roles as clearly distinct and separable in their daily activities as researchers often present them. In other words, we should understand the broader "repertoire" of behaviours that leaders have at their disposal, not only single elements within the repertoire. The behaviours that are studied in isolation are important, but when we ignore other types of behaviour that leaders are simultaneously engaged in, the danger is that we lose sight of the "big picture" of challenges that leaders face on a daily basis (Head, 2010).

We argue that combining various behaviours is the essence of leadership (see also Pedersen et al., 2019). The OECD (2001) indeed signalled that leaders need diverse competences to cope with complex challenges in the public sector, which recent country studies reiterated (Gerson, 2020). Leadership training programs

in the United Kingdom, United States, Germany, Sweden, Norway, and Mexico prepare leaders for a range of behaviours: from networking and collaborating, directing and managing internal processes, envisioning and facilitating change, to inspiring and creating commitment among employees (OECD, 2001). The relational character of leadership is explicitly addressed due to increasingly collaborative set-ups for public value creation: leaders need to work with a range of internal and external stakeholders across boundaries of countries, sectors, organizations, and professions, as well as throughout the hierarchy, from employees to top management (Gerson, 2020; OECD, 2001).

To extend our understanding of leadership and its relationship with organizational variables, we can benefit from examining repertoires of behaviours. A leadership behaviour repertoire can be described as a set of behavioural options at a leader's disposal to address a variety of issues in a suitable fashion (Denison et al., 1995). Yukl (2012) and recently Pedersen et al. (2019) and Kramer et al. (2019) also acknowledge that looking at single behavioural types provides only partial comprehension of leadership. Leaders often have to combine various types of action because they are faced with multiple tasks and objectives, and they need to balance competing demands on scarce resources (Quinn, 1984). Therefore, the effectiveness of leadership depends on the variety of leadership behaviours instead of a particular type (Denison et al., 1995; Havermans et al., 2015). Taking the perspective of leadership behaviour repertoires can assist in understanding leadership in its complexity, complementing ongoing efforts in the field.

Looking at leadership behaviour repertoires is particularly relevant in contexts that are characterized by ambiguity. Ambiguity creates a need for leadership (Moore, 1995), yet poses challenges for many public leaders in balancing multiple needs from their environment. This means that leaders are challenged to adopt behavioural strategies to match these contingencies. This is typical for public organizations: the different values, conflicting goals, and competing interests of a range of stakeholders at stake in public organizations confront leaders with simultaneous demands, which are often vague and/or potentially conflicting (Davis & Stazyk, 2015; Hood, 1991; Moore, 1995). Moreover, the saliency of issues changes. The variety of interpretations of what is to be done makes the leadership context ambiguous and puts leaders in a position of equivocal decision-making (Christensen et al., 2018; Chun & Rainey, 2005; Feldman, 1989). In addition, leaders in public organizations operate in an environment with increasingly complex organizational structures and ambiguous authority relationships. Formal authority is often

fragmented and distributed among several organizational members, which means that leaders are often not fully allowed to make decisions (Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011; Gronn, 2002; Shamir, 1999). Consequently, this dispersion of power creates leadership interdependencies and requires that leaders involve various other stakeholders to accomplish their objectives (Gronn, 2002). It can therefore be expected that leaders within such contexts need to combine many different leadership behaviours from their repertoire and do so in various directions to stimulate collaboration: influencing and facilitating subordinates, peers, superiors, and external stakeholders—multiple at a time (Moore, 1995; 't Hart, 2014; van den Bekerom et al., 2016). This context of ambiguity induces leadership that is best approached through a repertoire perspective.

This study therefore presents the following question: *How can leadership in an ambiguous context be conceptualized as a behaviour repertoire?* To allow a comprehensive understanding, leadership is defined as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives." (Yukl, 2008, p. 8). This definition is adopted, because framing leadership as a process highlights that leadership is a continuous effort that encompasses a wide range of activities. Indeed, from the organizational science and generic leadership literature we can conclude that leadership behaviour is diverse, and leaders have to engage in a variety of behaviours to be effective (Behrendt et al., 2017; Denison et al., 1995; Yukl, 2012). This comprises behaviours that are frequently distinguished as "leadership" and "management." While those are often seen as distinct, both types are important and complement each other (Bedeian & Hunt, 2006), and following Yukl (2012), it can be all seen as leadership behaviour. Managers, as formal leaders, are often expected to perform both (Head, 2010). Furthermore, incorporating the relational character highlights that leadership takes shape in interaction with a variety of stakeholders. Besides the typical focus on subordinates in research on individual leaders' behaviour, the broader public management literature teaches that superiors, peers, or external actors are included in the process of leadership. This accommodates Moore's (1995) perspective that public managers work in different directions—downwards, upwards, sidewards, and outwards (van den Bekerom et al., 2016).

This article conceptualizes a repertoire perspective on leadership behaviour and illustrates its relevance with accounts of leadership behaviour repertoire uses based on in-depth interviews with public leaders. Conceptualizing is an essential

building block for theory development: developing concepts that are aligned with the empirical world facilitates realistic empirical research and elaboration of theories. We thereby aim to contribute to public management research on leadership by suggesting how integration of a repertoire perspective can advance the field's current research agenda and our understanding of leadership in its complexity. A qualitative approach is adopted to integrate the situational context of leaders in our understanding of leadership. Accounting for context is relevant, because characteristics of the context in which leaders behave affect leadership (e.g., George, Van de Walle et al., 2019; Nielsen & Cleal, 2011; Porter & McLaughlin, 2006; Schmidt & Groeneveld, 2021; Stoker et al., 2019). Building on contingency theory's premise that "one size does not fit all," studying leadership by the same person in different situations is particularly facilitated by adopting a repertoire perspective (cf. Pedersen et al., 2019). Elaborating empirically how leaders combine diverse options from their repertoire, varying between situations, highlights the complexity of leadership and the need for further research to adopt a conceptualization of leadership behaviour as repertoire.

The article proceeds with a discussion of previous research on leadership in the public management literature to build the study's conceptual framework. Next, the empirical setting and methodological choices will be elaborated. The subsequent section shows various uses of a leadership behaviour repertoire highlighted by the ambiguous context. The article concludes with a discussion on the potential contribution of the repertoire perspective, emphasizing its theoretical and methodological implications. Building on current lines of research, we argue that the field's research agenda would benefit from adopting a repertoire perspective, since this more comprehensive conceptualization can stimulate theoretical and empirical work connected to the bigger picture of leadership challenges. Thereby it can challenge and advance our understanding of leadership and its relationships with other organizational phenomena.

2.2 The leadership behaviour repertoire: A conceptual framework

In an ambiguous context, competing demands present a variety of challenges for leadership that require leaders to use different types of leadership behaviour suitable for a variety of purposes. Recently, Pedersen et al. (2019) show that managers engage in a range of different behaviours. Their study provides support for studying leadership from a more holistic perspective that acknowledges the behavioural complexity of public managers. These authors also argue that a more complex conceptualization has been missing despite efforts to develop typologies of management and leadership. A similar effort by Kramer et al. (2019), who focused on leadership in interorganizational collaboration, confirms this call for a more comprehensive perspective. Therefore, we conceptualize leadership as a leadership behaviour repertoire. Building on the work of Quinn (1984) and Denison et al. (1995), a leadership behaviour repertoire can be seen as a set of behavioural options that can be matched to the circumstances at hand. This concept embraces the idea that leadership is complex and is characterized by a diversity of behaviours used in combination.

Research on leadership in the public management literature contains a variety of elements relevant for a repertoire conceptualization of leadership, scattered in separate research traditions. These traditions define and conceptualize leadership distinctively. Two distinctions underlie this separation. A first distinction concerns the operationalization of leadership: the literature shows variety in focusing either on styles, behaviours, or relations. These operationalizations are not mutually exclusive, yet prior research tends to maintain a more narrow focus. A second distinction concerns the level of abstraction and aggregation. One part of relevant literature discusses empirical constructs focused on individuals, while another share involves a broader governance mode concept, centred on networks. We discuss three prominent lines of public management research that contribute valuable elements of leadership behaviour repertoires and point out their positions on the two distinctions discussed.

Firstly, research on leadership of individual leaders in (public) organizations tends to concentrate on leadership styles, in particular transactional, transformational, and charismatic leadership (Lord et al., 2017; Ospina, 2017; van Knippenberg & Sitkin 2013; Vogel & Masal, 2015; Yukl, 2012). These studies focus on the downward dyadic relationship between manager and employee, in which

leaders motivate employees to perform well (e.g., Jensen et al., 2019; Vermeeren et al., 2014). This tradition has an empirical individual-centred approach. Its measurement involves motivating behaviours, but the main focus is put on leaders' style of conduct instead of the actions themselves. Examining styles tells us something about how leaders implement their actions without taking the range of behaviours into account. Although the Full-Range Leadership Theory and the Multifactor Leadership Questionnaire (e.g., Antonakis et al., 2003) form an attempt at a more encompassing approach of leadership styles, it is still limited to the supervisor–employee relationship.

Secondly, internal and external management (O'Toole & Meier, 1999; Pedersen et al., 2019) and managerial networking (Torenvlied et al., 2013; van den Bekerom et al., 2016) is relevant here, although these studies speak in terms of management rather than leadership. This research tradition highlights that leadership encompasses multiple relationships with a range of stakeholders, inside and outside the organization. Again, this tradition has an individual, empirical focus. Whereas measurement of internal management includes specification of concrete behaviours, measurement of external management and networking often only involves the frequency of interactions with various stakeholders in different directions. This measurement then lacks specification of types of leadership behaviours used within such stakeholder relationships.

Finally, collaborative governance research involves collective or distributed leadership. This tradition has a strong focus on collaboration and relationships with a wide range of actors, reflecting that managing networked structures instead of single organizations takes centre stage (Bryson et al., 2015; Crosby et al., 2017). In contrast to the other two lines of enquiry, this type of research is concerned with collective leadership as a governance concept: leadership is treated as the product of the dynamics of many individuals' actions and does not concern leadership behaviour of individual leaders (e.g., Ospina, 2017). In a recent study, Cristofoli et al. (2019) combine the individual and network focus, by investigating managers' network behaviours to assess network effectiveness. While this and similar studies add on to the external management and networking literature (and are equally not speaking of leadership), leadership largely remains a governance concept in this tradition.

The public management leadership literature is thus empirically rich yet fragmented across various traditions, and not aligned (see also Ospina, 2017). Research in the tradition that shares our focus on the individual level of leaders'

behaviour generally operationalizes leadership rather narrowly focused on motivating behaviours in the downwards, dyadic relationship between manager and employees. While this research could benefit from the variety of insights from other traditions, they are rarely integrated. As a result of the fragmentation and disconnection, a comprehensive view that shows how leaders use the diversity of behaviours and combine various behaviours remains absent. Yet, effective leadership comes about when leaders employ the variety of their leadership behaviour repertoire (Denison et al., 1995; Havermans et al., 2015; Hooijberg, 1996). Approaching leadership with a repertoire perspective can overcome this.

The leadership behaviour repertoire is a collection of behavioural options available to a leader to pick and choose from to find a way to act suitable in light of the circumstances. The repertoire embodies the variety of roles (Dension et al., 1995) leaders fulfil that can be enacted by a range of behaviours in relation to a range of actors in different directions. The behavioural options then comprise combinations of behaviours differing in orientation (task, relations, change, external environment; Yukl, 2012) and directions of action (upwards and downwards in the hierarchy to superiors and subordinates, sidewards to those in comparable positions, and outwards to external stakeholders (Moore, 1995; van den Bekerom et al., 2016)). Leaders have leeway to make various combinations: combinations can be more extensive or more simple, and there is no fixed combination between behaviour types and relations in which they are used. The repertoire signifies that leaders have options to adapt to changing situations.

In sum, a repertoire conceptualization sees leadership behaviour comprehensively in terms of behaviours and relationships and captures interactions between various behavioural options. Leadership repertoires are not just a sum of its separate elements. The need for an integrated view of leadership behaviour through a repertoire perspective will be illustrated below and discussed in the research agenda.

2.3 Research setting

To illustrate how leaders use the leadership behaviour repertoire, an empirical setting characterized by contextual ambiguity provides a highlighting opportunity. When ambiguity in the context of leaders is omnipresent, leaders are likely forced to employ and combine diverse behaviours, because no clear guidance (clear priorities between interests, regulations, formal authority) is available to them to accomplish goals directly. While such ambiguity can be found throughout the public sector, it is particularly pronounced within universities. Therefore, universities were selected as a typical case (Gerring, 2006), in line with the tradition in organizational studies (Askling & Stensaker, 2002; Cohen & March, 1974; March & Olsen, 1979). Contextual ambiguity is particularly pronounced within universities, for two reasons.

Firstly, ambiguity is an ever-present phenomenon at universities, since universities work on multiple goals at the same time, involving research, education, and outreach tasks. Thereby they have to deal with a range of stakeholders with different interests, such as employees from multiple faculties and departments, students, and external stakeholders such as ministries or partner organizations (Bryman & Lilley, 2009; Enders, 2012; Rainey & Jung, 2015). March and Olsen (1979), in their highly cited study on ambiguity and choice in organizations, illustrate their argument by the empirical study of universities based on the observation that educational institutions are prone to ambiguity: "goals that are unclear, technologies that are imperfectly understood, histories that are difficult to interpret, and participants who wander in and out" (p. 8). This forms a point where ambiguity for leaders can emerge, since this creates room for various interpretations of priorities and desirable courses of action. It is then likely to generate variety in leadership behaviour— both in terms of what is done and the complexity of this behaviour.

Additionally, the complexity of universities' organizational structures enhances the need to combine a range of leadership behaviours and work in multiple directions. Universities operate a system of shared governance, which means that the decision-making authority of leaders in universities is often limited and shared between different formal positions while professionals enjoy much autonomy (Bolden et al., 2009; Pearce et al., 2018; Seeber et al., 2015). This adds structural complexity, which may affect what leaders can do in terms of leadership behaviour. As a result, it is expected there is a marked need to use a variety of leadership behaviours from their repertoire.

2.4 Methods

Data collection

Data have been collected through in-depth semi-structured interviews with leaders. Interviews provide rich data that can show how leaders combine various roles and behaviours in different circumstances. The interviews focused on what leaders do in ambiguous situations, with topics covering how leaders perceive their leadership roles, what tensions they experience, and how they fill in their role and address such challenges (see topic list in Appendix A). Since the perception of the environment and one's role within it can be highly important for one's behaviour (James & Jones, 1974; Weick et al., 2005), eliciting these perceptions while allowing participants to elaborate freely is valuable. Interviews lasted between 50 and 90 minutes and were recorded and transcribed verbatim for analysis.

The focus is on leaders in positions of formal authority, which means people who have a managerial position. Although leadership behaviour is not necessarily limited to be performed by only those in formal leadership positions, we focus on leaders as those people within organizations with such positions, because these people have extensive leadership tasks incorporated in their position—enacting leadership is expected of them. Formal leaders in universities in middle management positions are increasingly tasked with responsibilities related to strategy, accountability, and innovation as a result of shifted modes of governance. These tasks create expectations and requirements for such position holders to show leadership behaviour (Beerkens & van der Hoek, 2022; Pearce et al., 2018). It should be noted, however, that this does not have to exclude forms of shared or distributed leadership. Such forms of leadership are present in this study, since it also includes leaders "leading leaders" and leaders with tasks delegated within a board who do not necessarily have the accompanying formal authority (Gronn, 2002; Ospina, 2017; 't Hart, 2014). Participants have positions as (vice) deans; directors; faculty, department, and institute board members; and chairs or coordinators of research groups and teaching programs. All participants are active academics who fulfil a managerial position for a specific term, not professional administrators.

Data collection took place from December 2017 through February 2018 at three comprehensive, research-intensive universities in the Netherlands. Within each university, participants were recruited from the faculties hosting social sciences and natural sciences. Potential participants were identified through university websites and indexed according to faculty, organizational unit, type of position, and

gender. Since this study has an exploratory character, participants were invited to create a sample including a balanced variation on these characteristics and thereby variation in types of experiences. Therefore, an equal number of men and women in similar types of positions in both social and natural sciences were invited. Since the number of women in formal leadership positions in the natural sciences was comparatively small, oversampling them was required. If a participant agreed to participate, no direct colleagues from the same department or board were selected. Invitations and one reminder email were sent by email, generating an invitation acceptance of 19 out of 37. Those who declined the invitation did so with the argument of lack of time. We have no indication of bias in who accepted the invitation, as an equal number of men and women declined to participate or did not respond to the invitation. Table 2.1 provides an overview of participants sorted by discipline, gender, and the level of their leadership position within the university.

Table 2.1. Interview participants per discipline, gender, and level of leadership position within university (n = 19)

		Social sciences		**Natural sciences**		**Total**	
		Male	**Female**	**Male**	**Female**	**Male**	**Female**
Level	Faculty	2	1	1	1	3	2
	Department	2	5	6	1	8	6
	Total	4	6	7	2	11	8

Analysis

Data were analysed using the method of Thematic Analysis, based on Boyatzis' (1998) approach. A hybrid approach was used to accommodate both inductively elaborating the variety of leadership behaviours and using sensitizing concepts of roles in the leadership behaviour repertoire (Denison et al., 1995) and of direction of leadership behaviour (Moore, 1995; van den Bekerom et al., 2016). Denison and colleagues (1995) distinguish a comprehensive set of leadership roles and accompanying behaviours: innovator, broker, producer, director, coordinator, monitor, facilitator, and mentor (see Table 2.2 for brief descriptions per role). Whereas some roles involve more task-oriented behaviours, other roles concern externally oriented networking or relations-oriented coaching behaviours (Yukl, 2012). Since it is flexible in accommodating various directions in which the leadership behaviours are exercised, a connection to Moore's (1995) and van den Bekerom and colleagues' (2016) distinction between

leading upwards, downwards, outwards, and sidewards can be made. Therefore, this typology captures the various takes on leadership present in the public management literature and fits a repertoire perspective on leadership at the level of behaviour in an encompassing way.

Starting with open coding, an inventory of leadership behaviours was established by extracting key themes close to the wording used by participants. Co-occurring behaviours were grouped into categories of similar actions. This resulted in 13 categories of leadership behaviours. Axial coding linked these categories to the leadership roles as described by Denison et al. (1995). The behaviour categories then give more detailed substance to the role categories, and role categories can be seen as clusters of behaviours with a similar purpose. Five behaviour categories seemed to fit several leadership role categories, which were then split up into more specific categories matching the description of the role categories. During the axial coding, there appeared no substantive distinction between behaviour types matching the coordinator and producer roles, which were therefore merged. This resulted in a total of seven leadership roles encompassing 18 types of leadership behaviours. This coding scheme is presented in Table 2.2.

The coded data have been examined using coding stripes and matrix queries to seek patterns of co-occurrence of leadership behaviours and directions in which the behaviours were exercised. The units of analysis in this process were the situations discussed by the participants, in which they experienced ambiguity and were showing leadership behaviour. All analyses of the coded transcripts are performed in NVivo. This pattern-seeking has led to a categorization of leadership behaviour repertoire uses that varied in their complexity, as the next section will discuss.

Table 2.2. Leadership roles (derived from Denison et al., 1995) and behaviours (derived from interviews)

Role	Description	Behaviour categories	Description
Innovator	The innovator is creative and envisions, encourages, and facilitates change.	Taking initiative	Actions that leaders take that concern enacting an innovation. Can be found when examples of new programmes or a merger of units are discussed.
		Envisioning direction	Actions of leaders aimed at preparing and planning for the longer term. Can be found in passages about strategy or the bigger lines.
Broker	The broker is politically astute, acquires resources and maintains the unit's external legitimacy through the development, scanning, and maintenance of a network of external contacts.	Representing interests	Actions of leaders focusing on promoting the interests of people or units within the organization. Also to have an effect on decisions taken by someone else or another level within the organization. When interviewee discusses standing for her/his people or when offering suggestions or pushing for a decision or plan.
		External analysing	Actions of leaders that involve observation of environmental trends for example. Differs from seeking input, which involves more interaction and communication, whereas analysing is observant.
		Cooperating	Actions of leaders that have to do with achieving common objectives. When interviewee discusses teaming up with peers.
		Giving input	Actions of leaders to spread information and ideas and getting involved in decision-making. Can be found where getting involved, staying in contact, and talking to people, are discussed.
		Managing boundaries	Actions that leaders engage in to deal with or work around organizational boundaries, mainly regarding cooperation with other units or organizations.

Table 2.2. Leadership roles (derived from Denison et al., 1995) and behaviours (derived from interviews) *(continued)*

Role	Description	Behaviour categories	Description
Director	The director engages in goal setting and role clarification, sets objectives, and establishes clear expectations.	Setting direction	Actions of leaders aimed at making decisions and taking a stance, for example to end a project/process.
		Setting scope conditions	Actions that leaders engage in to set, deal with or work around boundaries in the form of scope conditions or limitations. It is about drawing, passing on and protecting lines.
		Explaining	Actions of leaders to explain plans, information and ideas. Can be found where staying in contact, talking to people, explaining plans, and getting involved are discussed.
Coordinator	The coordinator maintains structure, does the scheduling, coordinating, and problem solving, and sees that rules and standards are met.	Keeping business running	Actions of leaders that have to do with steering processes and managing personnel. These concern the daily managing tasks instead of strategic decision-making.
		Solving problems	Actions of leaders as trouble shooters and mediators. Can be found in fragments about conflicts, crises, or anger for example.
Monitor	The monitor collects and distributes information, checks on performance, and provides a sense of continuity and stability.	Internal analysing	Actions of leaders that involve observation of internal affairs, for instance about employee well-being or unit performance. Differs from seeking information, which involves more interaction and communication, whereas analysing is observant.
		Seeking information	Actions of leaders to gather information to know what's going on. Can be found when leaders discuss talking to people inside and outside their organization.

Table 2.2. Leadership roles (derived from Denison et al., 1995) and behaviours (derived from interviews) *(continued)*

Role	Description	Behaviour categories	Description
Facilitator	The facilitator encourages the expression of opinions, seeks consensus, and negotiates compromise.	Building community	Actions that build commitment of others in a process and a sense of 'sharedness'. Can show when interviewee gives example of making plans together. Not the same as asking for input (though they regularly occur together), but really working on ownership and cohesion.
		Seeking input	Actions of leaders to gather ideas. Can be found when leaders discuss talking to people inside and outside their organization.
Mentor	The mentor is aware of individual needs, listens actively, is fair, supports legitimate requests, and attempts to facilitate the development of individuals.	Coaching	Actions that leaders take in the supervisory relation with their employees. Can show when interviewee discusses things like mentoring or keeping an eye on the human side.
		Motivating	Actions of leaders to encourage people to participate or perform. Discussed in fragments about getting people to do something.

2.5 Leadership behaviour repertoire uses: Empirical illustrations

Based on the interview data, different uses of the leadership behaviour repertoire were uncovered, which are illustrated below. To illicit these accounts, participants were asked to tell about situations in which they were confronted with multiple simultaneous demands that produced tension and how they acted then. In response, participants described a rich variety of leadership behaviours, showing a repertoire consisting of a range of behavioural options. Throughout the interviews, participants reported on combining several behaviours to address issues they are facing. Thereby they often need to balance several objectives, create synergies, or work in parallel on multiple issues. Participants described different types of behaviour repertoire uses, that vary in terms of the number of behaviours used and the number of directions in which they operate. The variety of leadership behaviour repertoire uses can be categorized in four quadrants, which is displayed in Table 2.3. Important to emphasize is that leadership behaviour repertoire uses concern behaviour modalities, approaches in dealing with leadership situations, rather than traits or characteristics of people. Leaders use those behaviour modalities differently between situations.

The discussion below builds up in terms of leadership complexity (see also Table 2.3): first simpler uses of the repertoire are discussed, followed by uses that involve more different types of behaviour and more different directions.

Table 2.3. Variation of leadership behaviour repertoire

Simple repertoire uses *Issue leadership* • Few behaviour types • Few directions	**Moderately complex repertoire uses** *Boundary spanner leadership* • Few behaviour types • Many directions
Moderately complex repertoire uses *Jack-of-all-trades leadership* • Many behaviour types • Few directions	**Complex repertoire uses** *All-round leadership* • Many behaviour types • Many directions

Simple leadership behaviour repertoire uses: Few behaviours, few directions

Leaders do not always use a substantial part of their leadership behaviour repertoire. Only a few types of behaviour directed to a single type of actor can form a leader's response to occurring needs. Leaders discussed situations in which they dealt with a single type of actor such as their employees or were engaged in issues that involved a single task. Such examples match with how public leadership behaviour is often studied, in research with the common focus on the supervisor–employee dyadic relationship. Instances of this kind can be found concerning motivating and coaching employees or managing conflict between employees. Though these examples as shown below can be classified as simple repertoire uses, it should be noted that more often than not more than one type of behaviour was used. This illustrates that delineating leadership behaviour in a more limited conceptualization may be too simple and may not be congruent with leaders' practice.

For example, a participant described how he had facilitated reintegration of employees who suffered from burn-out (interview 13). He describes using behaviours of the mentor and monitor roles in downward direction: signalling and discussing burn-out of an employee to acknowledge the existence of a problem, giving the employee autonomy to come up with his/her own plan to improve the situation, discussing the plan and directing towards solutions or assistance if necessary, and monitoring and discussing progress. Another example originates with an educational director. In a mentor role, she keeps an eye to the human behind the employee, facilitating him or her to make choices about the number of hours s/he wants to work when family situations change, but at the same time ensuring that all courses can be taught and sufficient staff capacity remains, using behaviours fitting a coordinator role (interview 14). These examples show that leaders keep the interests of employees in mind while simultaneously also considering the implications for an institute and continuity of teaching programs. Yet despite concurring demands on the leader, a relatively simple repertoire use is shown.

Another type of example that appeared several times concerns the broker role in upward direction. For instance, a head of the department discussed that part of his job is to shield off his staff from new rules and administrative burden as much as possible. In the case of new digital systems being introduced by the university, he raised his voice and objections repeatedly towards the faculty and higher levels within the university. As part of this, he also participated in a review committee,

gathering experiences and problems with these systems from all parts of the university, to advise the university board to change the systems and reduce the burden on employees (interview 2).

Moderately complex leadership behaviour repertoire uses: Few behaviours, various directions

Other times, participants described situations featuring more comprehensive uses of the leadership behaviour repertoire. Leaders focus on a few behaviours fitting one role, but thereby engage a range of actors in various directions. This type of instance shows similarities with the network perspective from the literature. Examples regularly feature behaviours of a communicating and connecting kind but can take on more task-oriented behaviours in more complex contexts.

A vice-dean talked about a process to create a shared story about the newly developed strategy. The leadership behaviours mainly fall within the facilitator role, but were directed downwards, outwards, and partially also upwards. In this case, earlier efforts to engage various parts of the organization in the development of the new strategy had not been accomplished that the outcome resonated broadly and generated excitement for the future envisioned together for the strategy. She therefore organized different types of meetings with staff as well as students to discuss the important values and how the new faculty strategy would contribute to advancing these values. Seeking input, bringing perspectives together, and giving the various stakeholders a voice in creating a story brought about that a lively discussion and a sense of community around this story emerged as a basis for acting upon the strategy sustainably (interview 3).

Other illustrations of this quadrant feature participants who are active in collaborations across organizational boundaries - both internal boundaries within the university and outward boundaries. An example comes from a research group leader who also acts as chair of a university-wide multidisciplinary network. In her work for this network, she talks about using leadership behaviours fitting the broker role in upward, sideward, and downward directions. As chair of this network, this participant works on setting up collaborative teaching modules as well as integrating the network's focal theme within existing programs at all faculties. This means that she is engaged a lot in talking to deans, department and education directors, and peers throughout the university to explain the relevance of incorporating the theme within university teaching, asking them to participate and allocate resources within their programs to develop such education, and coordinating between participating

programs and teachers on the work floor. Bargaining is part of this process, as well as establishing commitment from the university board to leverage it in those negotiations. Keeping in touch and following up with all stakeholders in the various directions, representing interests, cooperating, and spotting opportunities all fit this broker role, but takes different shapes dependent on which type of actors in which direction she engages with (interview 16).

Moderately complex leadership behaviour repertoire uses: Various behaviours, few directions

A similar yet different version of the more comprehensive repertoire use is found when leaders combine a variety of behaviours of multiple roles, but only use them in one direction. Such behaviour repertoire uses share with much of the literature that leadership is exercised in relation to a single type of stakeholder. It differs, however, by involving a combination of diverse behaviours, that emphasizes that leaders draw on multiple roles in these relationships.

An illustration is given by a head of department, whose department went through turbulent times and faced declining revenues and austerity measures from the faculty. She described her leadership in keeping the department afloat in terms of various behaviours matching the director, facilitator, and broker roles directed downwards at the staff working in the department. Initially, she had to get the change process in motion, which meant that she stressed the urgency of the problem and the need to take action for survival. Moreover, she stepped in to mediate and resolve conflict to get resistant staff members on board. This required organizing numerous meetings, having conversations with people separately, explaining the situation, and convincing the staff to make changes to the program. Besides giving input, she sought perspectives and ideas of the staff to solve the problems, giving them the opportunity to reshape the program along their expertise and thereby also create ownership of the community. Still, as head of the department, she made the conditions clear in order to reach the goal of solving the financial problems. Throughout the process, she worked on building social cohesion, trust, and a sense of collective ownership of the department, not only through participatory decision-making but also by organizing social activities and creating physical signs of community (a picture wall, for instance) (interview 19).

A further example of this type of repertoire use is provided by an educational director, who discusses how he works on getting the teaching program staffed and ensures educational quality. To plan all courses and allocate staff, he uses a

model that specifies how many hours are available to fulfil tasks. In this way, he provides transparency to his colleagues. When a teacher complains about their tasks and the time available, and that it would not be fair, he can use the model to show what needs to be done in a year and how all colleagues contribute to that. Besides his coordinator and monitor role behaviours, he also draws on mentor role behaviours, to make sure that supporting arrangements are in place for new teachers, for instance, training and assistance, and asking what tasks people would like to do and how he can help them. Building shared ownership by involving staff in discussions and asking them for plans to improve educational quality characterize his facilitator role (interview 7).

Complex leadership behaviour repertoire uses: Various behaviours, various directions

Lastly, complex combinations of leadership behaviour repertoire options are commonly used. Leaders made use of multiple behaviours and engaged with actors in various directions. Cases that involve strategy and organizational change are commonly at the heart of such examples. All participants shared the conviction and experience that strategies, plans for change, and important decisions should not be made by a leader alone, but instead should be developed together with their staff. This is important within the complex ambiguous contexts of many public organizations, because leaders lead professionals who have strong intrinsic motivation and a high level of expertise, while at the same time, many leaders still participate—like their staff—in the primary process like a "primus inter pares."

Exemplary for a complex leadership behaviour repertoire use is a head of department who elaborated on a process of formulating a new strategy for his department. He combined the innovator, broker, facilitator, and director roles and thereby worked downwards and upwards. Taking initiative, seeking and giving input, setting boundary conditions, delegating tasks and giving autonomy to his staff within these limits, overseeing but not directing the process, creating engagement, representing interests to the faculty board and financial department, and setting direction by making the final decisions based on input from the bottom-up process were combined in this process. New plans were being developed, while at the same time he started preparing for implementation. This example also illustrates the relational character of leadership spanning multiple organizational levels and working with actors in multiple directions. The participant facilitated employees within his institute to create bottom-up plans and influenced them by

providing boundary conditions, while at the same time, influencing stakeholders higher up in the organization to be able to implement the new plans without delay or difficulties (interview 18).

Another illustrative case is provided by an educational director, who initiated, developed, and realized a new international Bachelor program. She combined innovator, facilitator, monitor, and director role behaviours in various directions: downwards, sidewards, and outwards. Based on her analysis of developments in the educational environment, staff composition, and potential for future thriving, this educational director took the initiative to start talking about creating a new program. Together with coordinating and policy staff, she made sure the financial conditions would allow this initiative and she started seeking input from teaching staff in various rounds and through diverse channels. The process was intentionally participatory and efforts were made to ensure transparent communication with staff members. In this way, shared ownership and support for the program were created to make it a success. Additionally, in the logistical developments, she has sought help and cooperation with colleagues of other disciplines within the university, to learn from each other and unite their interests (interview 10).

2.6 Towards a research agenda

The illustrated uses of the leadership behaviour repertoire give rise to questions how this perspective can contribute to ongoing theorizing and research. This section outlines research directions that seem particularly fruitful to continue when conceptualizing leadership behaviour as a repertoire. Moreover, several methodological suggestions to make progress along those substantive lines are discussed.

Leadership behaviour repertoire uses in relation to context

In line with most leadership research, we have found between-person variation: between participants, the emphasis on certain types of behaviour differs. Whereas some participants seem to put their role as director more central, others more often act as facilitators or brokers. Nevertheless, all participants take on multiple roles and work in various directions, which makes clear that characterizing a leader by their most prominent style is too simplistic. Possibly of more theoretical importance then is the within-person variation. The same participant can show different uses of the repertoire in varying situations. Several interviewees explicitly

state that using the same "recipe" in all situations is not helpful, that instead, it is necessary to have sensitivity to contextual variation and use various approaches adapted to the situation. Such within-person variation of leadership behaviour implies that an adaptation process is ongoing and underlines the importance of looking at leadership integrally and contextually.

Increasing our understanding of how leadership itself takes shape is all the more important, because characteristics of the context in which leaders operate present challenges—not the least in public organizations. Leaders need to balance multiple needs from their environment while being constrained by the complex hierarchical structures that divide formal authority between leaders in different positions (Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011). Simultaneously, leadership is of growing importance in the pursuit of organizational goals (Shamir, 1999). So far, however, this question is largely overlooked (Porter & McLaughlin, 2006; cf. Schmidt & Groeneveld, 2021; cf. Stoker et al., 2019). Though it is debated to what extent the public sector is special, it is widely acknowledged that various aspects of publicness and the political context impact on organizational structures and processes amongst which leadership takes shape (Pollitt, 2013; 't Hart, 2014). Adopting a repertoire conceptualization of leadership behaviour and continuing within-person focused research can further stimulate systematic investigation of the impact of context factors on leadership.

Moving the focus from leadership of persons to leadership in situations helps disentangling leadership's complexity while integrating context in our understanding of leadership. Thereby we build on and set a step beyond recent work of Pedersen et al. (2019) and Kramer et al. (2019). Leaders could be thought of as being sensitive to contextual variations between situations and consequently, that such context sensitivity translates into context-sensitive behaviour: when a leader perceives the situation to be different, the behaviour deemed appropriate would co-vary.[1] A repertoire conceptualization can help to make this visible. It can then be argued that such context sensitivity is connected to a behavioural response based on contextual adaptation (Hooijberg, 1996; van der Hoek, Beerkens et al., 2021). It is worthwhile to investigate the relationship between contextual needs and a leader's individual skills, capacity, and preferences and what that means for how the repertoire is used. Follow-up studies should conceptualize and operationalize context variables specifically to avoid vague and irrelevant explanations and make situational variation meaningful.

Leadership repertoire uses in relation to outcomes

Another step can be made by investigating how leadership behaviour seen from this repertoire perspective relates to other organizational phenomena. In the existing literature, many studies show the effects of isolated parts of leadership on performance and employee attitudes (see Vogel & Masal, 2015). From a repertoire perspective, leaders can substitute and compensate their behaviours, and they prioritize their roles and behaviours differently (possibly) depending on the context. As van der Hoek, Beerkens et al. (2021) show, for example, leaders are likely to consolidate their behaviours when ambiguity increases. We have observed various shapes that the repertoire can take, but it would be worthwhile to investigate, too, whether those shapes have different impacts on outcome variables and under which conditions those relationships exist.

It has been found that leaders can use various approaches to be effective (Pedersen et al., 2019) and leadership is most effective when leaders draw on the variety of options of the repertoire (Denison et al., 1995; Havermans et al., 2015; Hooijberg, 1996). Using the repertoire's full range of options makes that leaders can match the diversity of issues they are addressing with suitable action, as the opportunities to create a fit between demands and response increase. Also in research on ambidexterity of leaders, it was found that effectiveness to fulfil various requirements was enhanced when leaders draw on a range of different behaviours (Mom et al., 2015). Moreover, as Smith's (2014) study shows, the pattern of behaviour and decisions over a longer stretch of time may have more important consequences for organizational outcomes than single actions and decisions. A repertoire conceptualization of leadership facilitates that combinations of behaviour with their combined impact are highlighted and can be evaluated.

Operationalization of the leadership behaviour repertoire

Our analysis has focused on the variety within leadership behaviour repertoire uses. Nevertheless, variety is only one perspective on this complexity. Not only which behaviours are used and in which directions, but a temporal lens to study repertoires can also add supplementary insights. Firstly, timing of the use of the repertoire's elements can vary. Leaders can undertake various actions in parallel, while at other times the different actions are more sequential. Moreover, the moment when leaders decide to start, stop or change their approach can differ. Also delaying or waiting involve this temporal factor. Our interview participants gave examples that indicate variation in timing. Another way in which we can learn

more about the leadership behaviour repertoire is by considering the duration and intensity of behaviours. Whereas leaders may spend only a single instance of short time on some activities, others may require full attention for either a longer or shorter time, or may be always ongoing in a monitoring fashion.

Several authors have called for attention for temporal factors such as timing, pace, rhythm, cycles, ordering, and trends in the study of organizational behaviour (e.g., Ancona et al., 2001; Castillo & Trinh, 2018; Johns, 2006) and public management (Oberfield, 2014a; O'Toole & Meier, 1999; Pollitt, 2008), though still very few empirical studies in public management have explicitly addressed this issue (e.g., Oberfield, 2014a, 2014b). By taking up a repertoire perspective to conceptualize leadership, more nuanced differences connected to subtle time variables could be illuminated.

Internal dynamics of the leadership behaviour repertoire

Besides further developing the operationalization of the leadership behaviour repertoire, the internal dynamics of the repertoire can be unpacked. Not only the elements of the repertoire themselves and how we look at them, but also how they are combined and balanced can be disentangled for deeper insights. Understanding why leaders use their repertoire as they do, how they combine and balance the various elements, and why so, helps to untangle the intricacies of the complexity of the leadership behaviour repertoire. As referred to before, the internal dynamics may cause differential effects than when a single type of leadership is examined.

One relevant aspect concerns the extent to which leaders are on the one hand intentional, strategic, and proactive in choosing their leadership behaviour, or reactive and habitual on the other hand (Boyne & Walker, 2004; Crant, 2000; Miles & Snow, 1978). Based on some indications in our data, variation exists in this respect. Sometimes leaders take a proactive approach and choose behaviours strategically to advance their goals. Building on findings by Havermans et al. (2015), intentional switching and combining of various leadership behaviours can be expected. Other times, leadership behaviour becomes a matter of reactively responding to what is thrown at a leader and defaulting to preferred styles.

Explanatory factors at the level of the leader may be relevant to consider. One way to understand such differences concerning the combinations leaders make, relates to the breadth of repertoire options available to them. In case leaders are aware of a large number of behavioural strategies they could adopt and have the skills to use them, this may lead to more varied repertoire uses and more variation

between situations. On the other hand, having knowledge and skills of only a few behavioural options, leaders may be more inclined to use the same and a limited repertoire. How this relates to length of tenure in a position or experience in leadership roles more generally could be examined. A second explanation could be found in how leaders perceive their room for manoeuvre. Feeling in control or in the position to frame issues may help to make such conscious strategic combinations. Feeling overwhelmed by the sheer amount of demands or in a position of putting out fires, however, may put leaders under pressure to forgo proactive strategic behaviour.

Methodological recommendations

To pursue these substantive avenues for continued study, a number of methodological suggestions can be made that seem particularly suitable when using a repertoire conceptualization of leadership behaviour.

Experimental methods are strongly encouraged and increasingly used in the field (e.g., Blom-Hansen et al., 2015; Jacobsen & Andersen, 2015). Experimental designs can be used to assess the extent to which leaders adapt their leadership behaviour to context. The controlled design can systematically build on insights from rich literature about the public sector context as well as from research in the contingency tradition. By manipulating contextual variation in experimental tasks or vignettes (Atzmüller & Steiner, 2010; Barter & Renold, 1999; Bellé & Cantarelli, 2018; Podsakoff & Podsakoff, 2019), the specific effect of context on leadership behaviour can be tested. A repertoire conceptualization may then reveal differentiation in how context factors influence leadership behaviour. Since experimental conditions can be designed by the researcher, numerous potentially relevant contextual dimensions discussed in public management research can be investigated on their effects on leadership behaviour repertoire uses. If participants are confronted with multiple manipulations each, within-person variation and adaptation can be examined (van der Hoek, Beerkens et al., 2021).

Another strategy to study leadership repertoires is using event sampling methods (Bolger et al., 2003; Kelemen et al., 2020; Ohly et al., 2010). These methods are based on within-person variation over time, whereby study participants can be asked to report their leadership behaviour at various points in time or after specified events occur. In addition, they can be asked to provide information about the context and situation in which this leadership behaviour was used as well as about results. Both quantitative multilevel designs and qualitative diary

studies could each contribute new insights: hypothesized patterns can be assessed or perceptions of and considerations in various situations can be disentangled. Therefore, event sampling methods can be used to test whether leaders adapt their leadership behaviour to changing situations. Secondly, this method offers opportunities to learn more about timing of changes in the repertoire use and reasons for doing so.

Finally, ethnographic methods such as shadowing and participant observation are suitable to study subtle differences in meaning-giving and leadership behaviour repertoire use (Alvesson, 1996; Geertz, 1973; Weick et al., 2005). Observing leaders in various types of situations and asking questions related to those observations can give better insights in leaders' interpretations of the context and their considerations when responding to a situation. In this way, the interaction between situational context and personal preferences and skills related to their repertoire can be studied. The balancing of different behavioural strategies by leaders can then be illuminated. This could add to develop the operationalization of the leadership repertoire as well as the understanding of its internal dynamics. Moreover, such methods are particularly useful to connect leaders' own intentions of their leadership behaviour to the perceptions of those around them to whom this behaviour is directed. Since self-other disagreement is common in the study of leadership behaviour (Vogel & Kroll, 2019), combining self-reported accounts with accounts of others can stimulate the repertoire's validity if confirmed.

2.7 Conclusion

We see more of leadership when we look at the leadership behaviour repertoire used in situations. Coaching, motivating, planning, solving problems should not be seen as stand-alone behaviours of a leader; instead, such actions are taken at the backdrop of and are impacted by the overall task of leading an organization, which involves many more leadership behaviours. This regularly evokes a more complex leadership repertoire use. Furthermore, the structures that divide authority of leaders and thereby make them interdependent, bring along that leadership behaviour does not only comprise supervising employees or leading downwards, but that 360-degree action is frequently required. The relational character of leadership is omnipresent in such complex environments. Leaders have to work in different directions and need to switch their strategies and combine various types of leadership behaviour to be able to influence and facilitate.

There are always trade-offs when defining a good concept, parsimony and depth being one of them in this case, and the utility for theory is the most important criterion when choosing the best concept (Gerring, 1999). In-depth studies on specific leadership elements have provided valuable evidence on the nature of certain behaviours, and their effects on various organizational outcomes. As a limitation, they ignore a symbiotic relationship between different behaviours. While more comprehensive, the repertoire approach has its own challenges, though. Due to its comprehensiveness, delineation of the concept as well as its operationalization and use in empirical studies is more complex.

The fragmentation of research in different, largely non-communicating parts of the literature may be developing a blind spot for the study of leadership behaviour of individuals in public organizations: though it may describe the real world well in relatively simple situations, it prevents studying leadership behaviour in a manner that covers the comprehensiveness of leadership in more complex situations common in public organizations. This study provides support for the importance of an integral approach that examines the combination of various leadership behaviours at the individual level in public management, because the ambiguous context of many public leaders forces them to draw on a broad repertoire of behaviours. Learning how leaders vary, combine, and balance their behavioural strategies is then essential, as it can provide further insights into obstacles and openings of effective leadership. The identified directions could be a guide for future research in this endeavour.

Notes

1. The premise of context sensitivity underlies research on contingency theory (e.g., Aldrich, 1979; Donaldson, 2001; Fiedler, 1967; Lawrence & Lorsch, 1967; Perrow, 1970) and situational leadership (e.g., Graef, 1997; Thompson & Vecchio, 2009; Yukl, 2008), though such studies generally focus on organizational structure or effectiveness as dependent on leadership or organizations' external environment. Situational leadership theory (Graef, 1997; Thompson & Vecchio, 2009; Yukl, 2008) sees leadership itself as dependent on context, but specifically focuses on employees' task maturity rather than a broader view of organizational context factors and narrows leadership to motivating subordinates.

Chapter 3

Matching leadership to circumstances? A vignette study of leadership behaviour adaptation in an ambiguous context

Abstract

Public organizations are often characterized by contextual ambiguity, which creates extra demands on leaders. Yet to what extent leaders adapt their behaviour to the ambiguity remains largely unknown. Drawing on the concept of requisite variety, we hypothesize that more ambiguous situations require more complex leadership behaviour. Furthermore, it is hypothesized that formal authority moderates such adaptation. Data were collected in a 2x2x2 vignette interview study with leaders in Dutch universities ($n_{observations} = 240$, $n_{participants} = 30$), organizations particularly prone to ambiguity. The within-person experimental design enables analysing how contextual variations elicit different choices by the same participant, controlled for between-person differences. Multilevel analyses show that, contrary to expectations, fewer leadership behaviours are used in situations with more contextual ambiguity, while formal authority increases the number of leadership behaviours. The results suggest that leaders in ambiguous contexts narrow the range of their actions, and a lack of authority in particular constrains the available repertoire.

van der Hoek, M., Beerkens, M., & Groeneveld, S. (2021). Matching leadership to circumstances? A vignette study of leadership behavior adaptation in an ambiguous context. *International Public Management Journal, 24*(3), 394-417.

3.1 Introduction

Characteristics of the context in which leaders are embedded pose challenges for leadership. This is particularly salient in public organizations where leaders often need to balance competing values (Hood, 1991; Quinn & Rohrbaugh, 1981) and cope with diffused structures of authority (Groeneveld & Van de Walle, 2011; Shamir, 1999). Working with multiple goals, diverse tasks, and a range of stakeholders confronts leaders with a multitude of demands, which puts them in ambiguous situations (Boyne, 2002; Chun & Rainey, 2005; Dixit, 2002; Murphy et al., 2017). A number of studies have analysed leadership behaviour in the unique public context, such as in a collaborative governance setting (Crosby & Bryson, 2005), politico-administrative setting (Tummers & Knies, 2016; Vogel et al., 2020), or a managerial setting (Jensen et al., 2019). The studies show that public leaders enact a wide range of different behaviours, but less is known about when or why leaders behave in a certain way.

To navigate ambiguity and address the various demands from their context, leaders have to adapt their leadership behaviour to match the situation (Denison et al., 1995). Nonetheless, whether and how leaders do so remains largely unknown. Explicitly accounting for the context in which leadership takes shape has been scarce in previous research, but its importance has been emphasized both in public management and generic leadership literature (e.g., O'Toole & Meier, 2015; Ospina, 2017; Porter & McLaughlin, 2006; Vandenabeele et al., 2014; Wright, 2015). Recently, some studies have begun to take up this challenge and provide empirical evidence of the context having impact on leadership and managerial behaviour (George, Van de Walle et al., 2019; Hansen & Villadsen, 2010; Nielsen & Cleal, 2011; Schmidt & Groeneveld, 2021; Stoker et al., 2019). Nevertheless, the primary focus of current research in public management seems to be on leadership outcomes (Vogel & Masal, 2015). In contrast, the question of how leadership itself is shaped requires further study.

In this article, we define leadership as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives" (Yukl, 2008, p. 8). Fitting with our central idea that leadership adapts to changing circumstances, this definition emphasizes the continuous and relational character of leadership. It accommodates the view of a leadership behaviour repertoire that consists of a wide range of behaviours necessary to match the circumstances

(Denison et al., 1995; Hooijberg, 1996). Since contextual ambiguity disturbs organizational goal pursuit, leadership can be an essential factor to temper this effect (Shamir, 1999). Leaders' ability to adapt their behaviour to the needs of the context deserves therefore more attention. Taking up this issue, our study contributes to the leadership and public management literature by investigating leadership behaviour adaptation to context. In particular, we set out to answer the question: *Do leaders adapt their leadership behaviour to varying levels of contextual ambiguity?* We used a novel within-person vignette interview design that combines advantages of quantitative and qualitative methods. The vignette experiment allows for controlled hypothesis testing, while an additional layer of insights to interpret those findings is gained through the interview data collection procedure. Presenting a sample of leaders in Dutch universities with a series of vignettes ($n_{\text{participants}} = 30$, $n_{\text{observations}} = 240$) allowed us to examine behavioural variation between situations for the same participant. Hypotheses on the relationship between leadership context and leadership behaviour are tested. Drawing on the concept of requisite variety (Ashby, 1952) it is hypothesized that more ambiguous situations require more complex leadership behaviour, meaning that leaders use more different types of leadership behaviour from their repertoire. Furthermore, it is hypothesized that such adaptation may be constrained by the leader's level of formal authority. Lack of formal authority may create a necessity for detours, and thereby stimulate leaders to exert more types of behaviour.

The study aims to contribute to the literature on leadership in public organizations in several ways. From a theoretical perspective, unlike other studies in the field, this article treats leadership behaviour as the dependent variable. Studies that evaluate the effect of various leadership behaviours on organizational outcomes tend to treat leadership as exogenous. Yet it is important to understand what determines the use of one or another behaviour in a specific context. Moreover, our study examines empirically the extent to which leaders adapt their behaviour to contextual variation – a claim that is often assumed, but not empirically tested. Methodologically, our study introduces a novel experimental, within-person design to leadership research, which allows isolating the effect of one specific contextual factor in a rigorous manner. Furthermore, the combination of experimental treatment and interviewing offers simultaneously the rigor of hypothesis-testing as well as further insights from the qualitative interpretation of respondents' answers. Finally, practitioners can take away that being aware of their leadership adaptation patterns, making trade-offs insightful, and ordering priorities could help avoid

side-lining important organizational interests. Our findings also show that formal authority enables leaders to use more types of leadership behaviour to address organizational dilemmas, reminding that the organizational structure matters.

The article continues with a theoretical framework that discusses the study's key concepts and hypotheses. The next section addresses the research design, followed by a presentation of analyses. Finally, the findings and their implications are discussed and conclusions are drawn.

3.2 Theoretical framework

Leadership adaptation in an ambiguous context

Given the complex and dynamic nature of the set of demands leaders in public organizations are facing (Boyne, 2002; Dixit, 2002; Head, 2010; Hood, 1991; Murphy et al., 2017), leaders need a repertoire of behaviours from which they can choose various options (Bryman & Lilley, 2009; Carmeli & Halevi, 2009; Denison et al., 1995; Havermans et al., 2015). Denison et al. (1995) distinguish eight roles of leaders that vary on their strategic orientation and direction: innovator, broker, producer, director, coordinator, monitor, facilitator, and mentor (see Table 3.1). Each role in the repertoire is characterized by a number of leadership behaviours. A leadership behaviour repertoire can then be seen as a range of behavioural options, connected to different roles, from which a leader can choose. It thereby captures the notion of "requisite variety" (Ashby, 1952): to be able to address a diversity of problems, leaders need to respond with a similar diversity in leadership behaviours. Since each option has its benefits, leaders must be able to switch among approaches and combine them to address and balance various needs in the situation at hand.[1] Prior research shows that effective leaders use more types of leadership behaviour (Denison et al., 1995) and different stakeholders characterize leaders' leadership behaviour differently, indicating that leaders adapt their approach to the type of stakeholder (Hooijberg, 1996).

The leadership situations that leaders are confronted with present a variety of demands and thereby create contextual ambiguity. A leadership situation is ambiguous when concurrent demands are vague and/or potentially conflicting, thereby giving leeway for multiple interpretations (Chun & Rainey, 2005; Feldman, 1989). Such "indirect goal conflict" leaves leaders in a state of equivocal decision making (Christensen et al., 2018, p. 199). Ambiguity arises because the various

demands are all important, and how they have to be prioritized, balanced, and realized is not clear-cut. After all, leaders cannot isolate these demands, but have to consider them in coherence (Denison et al., 1995). The extent of competition for resources between demands affects the level of ambiguity in the leadership situation (Chun & Rainey, 2005). When objectives are more aligned, the situation is less ambiguous and it is easier to find a way to cope with the demands in combination. When objectives are less aligned, the competition creates more pressure, making the situation more ambiguous and more difficult to cope with.

Although the demands producing contextual ambiguity for leaders have numerous aspects, two dimensions are particularly relevant for this article. One dimension concerns objectives to ensure an organization's longer term viability, yet involves a classic democracy–bureaucracy tension for leadership in public organizations. On the one hand, stability and continuity are needed to provide certainty and confidence for organizational performance.

Table 3.1. Leadership behaviour categories (Denison et al., 1995, pp. 527–528)

Role	Description
Innovator	The innovator is creative and envisions, encourages, and facilitates change.
Broker	The broker is politically astute, acquires resources and maintains the unit's external legitimacy through the development, scanning, and maintenance of a network of external contacts.
Producer	The producer is the task-oriented, work-focused role. The producer seeks closure, and motivates those behaviours that will result in the completion of the group's task.
Director	The director engages in goal setting and role clarification, sets objectives, and establishes clear expectations.
Coordinator	The coordinator maintains structure, does the scheduling, coordinating, and problem solving, and sees that rules and standards are met.
Monitor	The monitor collects and distributes information, checks on performance, and provides a sense of continuity and stability.
Facilitator	The facilitator encourages the expression of opinions, seeks consensus, and negotiates compromise.
Mentor	The mentor is aware of individual needs, listens actively, is fair, supports legitimate requests, and attempts to facilitate the development of individuals.

This need is mainly linked to daily operations and has a shorter-term character. On the other hand, organizations have to adapt and innovate to remain relevant and capable to deal with challenges. This need is more strategic and has a longer-term orientation. The literature on ambidexterity discusses that both shorter-term and longer-term needs have to be satisfied in order to secure the organization's future. Since achieving such ambidexterity draws on the same resources for different needs simultaneously, tension and ambiguity are prevalent (March, 1991; O'Reilly & Tushman, 2013; Raisch & Birkinshaw, 2008; Turner et al., 2013).

A second dimension involves the distinction between domains at which leadership is directed. Referred to as "leadership in organizations" (Dubin, 1979; Hunt & Ropo, 1995), leaders have a role as supervisors at the level of individual employees. Demands on leaders stem from individual organizational members and largely involve face-to-face interaction and operational and tactical leadership. Much public management research on leadership has examined leadership in this dyadic relationship between leaders and subordinates (Ospina, 2017; Vandenabeele et al., 2014; Vogel & Masal, 2015). Additionally, leaders have a role in handling issues at the organizational (unit) level: "leadership of organizations" (Dubin, 1979; Hunt & Ropo, 1995). Demands on leaders then originate with organizational interests that transcend individual employees and leadership is more strategic. Middle managers face both types of demands –coming from below and above– that are not always aligned.

When the needs to which a leader has to attend are more compatible, there is less contextual ambiguity, and it is arguably clearer for a leader how to proceed. In contrast, in a more ambiguous context, in which demands are more competing, leaders would have less straightforward paths to manage the issues at stake. For leadership adaptation to such circumstances, we could apply the principle of "requisite variety" (Ashby, 1952), as discussed above.

This leads to the expectation that leaders would use a more varied behavioural response, that consists of more different leadership behaviours to navigate and cope with the ambiguous situations. In sum, leaders would respond to more ambiguous contexts by using more options from their behavioural repertoire in terms of the types of leadership behaviour.

Hypothesis 1: Leaders employ more types of leadership behaviour when contextual ambiguity is higher.

Structural impact on leadership adaptation

The task context of leaders in many public organizations is not only ambiguous, it is also embedded within complex structures with leadership roles of different degrees of authority. What leaders can do in such contexts may therefore be limited by these structural factors (Johns, 2006; Pedersen et al., 2019; Perrow, 1970). Since devolution and decentralization are a common part of New Public Management (NPM) reforms and the rise of post-bureaucratic organizations2 (Groeneveld & Van de Walle, 2011), formal authority is increasingly distributed, blurring the traditional lines of authority. This has consequences for leadership (Shamir, 1999). Responsibilities regarding the management of increasing boundary-crossing cooperation (Groeneveld & Van de Walle, 2011) –applicable to regular tasks as well as more special projects– are divided between and delegated to multiple organizational members lower in the hierarchy, often without granting them the formal authority to fulfil their responsibilities independently (Getha-Taylor et al., 2011; Gronn, 2002; Shamir, 1999). Leadership tasks are then distributed through a "segmentation of authority" (Gronn, 2002, pp. 440-441), creating a "pluralistic domain" (Denis et al., 2001, p. 809) in which multiple actors represent various interests and objectives that are overlapping or competing to varying extents. The interdependencies thus created limit what leaders can do on their own. To achieve their objectives, leaders need to coordinate with others possessing needed authority. In organizations in which authority is more dispersed, interdependencies are greater, more coordination is required, and leadership is also more distributed (Gronn, 2002).

The shared nature of authority has implications for leadership behaviour. Following a logic of availability, the possession of formal authority would provide more opportunities for leaders to use more different types of leadership behaviour to address contextual ambiguity, since they have the position to do so (Johns, 2006; Hansen & Villadsen, 2010). At the same time, formal authority would free the way for leaders to provide a quicker fix comprising fewer behaviours to tackle ambiguous situations, since they could make final decisions regarding resources at their disposal. Similarly, a moderating effect of a lack of formal authority on the association between contextual ambiguity and leadership behaviour can also be argued in both directions. Lack of formal authority would put a limit on the number of types of behaviour at one's disposal, since one has not been granted the right to take particular actions while facing ambiguous demands (Johns, 2006; Shamir, 1999). On the other hand, following a logic of necessity, the (inter)dependence on

others in such a constellation might require a leader to work around this obstacle and try multiple routes in parallel, involving more types of behaviour, to match the contextual ambiguity (Gronn, 2002; Shamir, 1999). It is therefore hypothesized that the level of formal authority connected to a position moderates the relationship between contextual ambiguity and leadership behaviour, with two competing hypotheses regarding the direction of this effect.

Hypothesis 2a: The relationship between contextual ambiguity and leadership behaviour is stronger for leaders with a higher level of formal authority.

Hypothesis 2b: The relationship between contextual ambiguity and leadership behaviour is stronger for leaders with a lower level of formal authority.

The conceptual model in Figure 3.1 visualizes the hypothesized relationships.

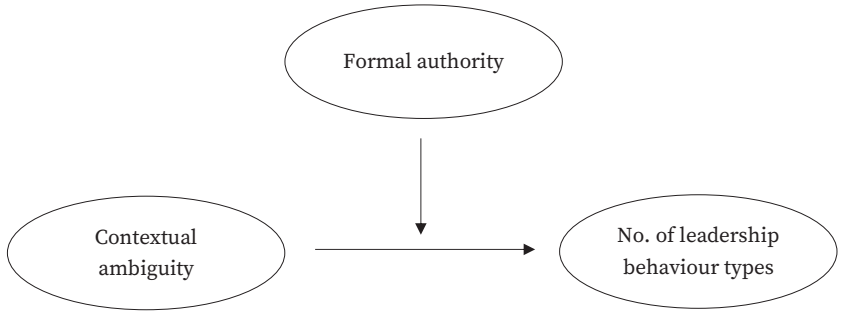

Figure 3.1. Conceptual model.

3.3 Research design

Data collection

Data were collected in a vignette study from April through June 2019. A vignette study can be used to test relationships between variables in a quasi-experimental fashion (Aguinis & Bradley, 2014). Since the key variables are manipulated by the researcher, this research method is particularly strong in terms of internal validity. To be able to assess whether leaders adapt their behaviour to context, a within-person design is employed. Each participant is presented with multiple vignettes, to see how different aspects of context lead to different choices by the same participant (Aguinis & Bradley, 2014; Atzmüller & Steiner, 2010). This within-person design then allows us directly to test behavioural adaptation among situations, while controlling for individual characteristics between participants. We administered the vignettes in an interview setting to complement the experiment's hypothesis testing with additional qualitative insights. This helped us to understand the quantitative results better, because interviews offer room to elaborate responses and probe for considerations (Barter & Renold, 1999; Jenkins et al., 2010).

Vignettes were designed by drawing on cases brought up in interviews (van der Hoek, Groeneveld et al., 2021) with leaders in the same type of positions as those participating in this study. Dilemmas that were recurrently brought up by interview participants in that prior study were selected to create scenarios that would closely resemble the practice of the participants in this study. In this way, scenarios easily activate participants to engage with the scenario and obtain a realistic behavioural response. This "actual derived cases" approach enhances the scenarios' realism, contributing to internal and external validity (Aguinis & Bradley, 2014; Barter & Renold, 1999; Shepherd & Zacharakis, 1999). This was supported during the vignette interviews by participants' comments about the topicality of issues covered in the scenarios and the examples from their own practice they shared. The vignettes were tested in six cognitive interviews with participants from the research population. A logbook was kept to track decisions to change the vignettes. The translated vignette materials can be reviewed below (see Measurement).

Sample

Vignette interviews were conducted in Dutch universities. This empirical setting is suitable for our research goals for several reasons. First, universities are organizations particularly prone to ambiguity: "goals that are unclear, technologies that are imperfectly understood, histories that are difficult to interpret, and participants who wander in and out" (March & Olsen, 1979, p. 8). They have parallel goals and tasks in research, education, and societal outreach, which have to be managed with limited resources. Thereby they have to deal with a range of stakeholders with diverse interests, including employees, students, and external stakeholders such as government departments or partner organizations (Enders, 2012). Indeed, Bryman and Lilley (2009) indicate that leaders within universities are confronted with various demands from these stakeholders that often compete. In combination, this creates conditions where ambiguity emerges, allowing various interpretations of priorities and desirable courses of action.

Second, dispersed formal authority involving shared responsibilities and competences is common in universities. In universities, the formal authority of organizational members in administrative roles is limited and often shared with others in different formal positions in a system of shared governance. At the same time, professionals enjoy and expect much autonomy (Bolden et al., 2009; Pearce et al., 2018; Seeber et al., 2015). In combination with the rotating primus-inter-pares system, this limits authority attributed to the formal leadership position ("titular authority") (Bess & Goldman, 2001, p. 421). The omnipresence of ambiguity and the distribution of authority makes the university a typical case (Gerring, 2006) to investigate leadership adaptation to ambiguity.

As participants we selected acting chairs, directors, and board members of departments, institutes, and teaching programs from a variety of disciplinary backgrounds from two research universities in The Netherlands. All participants are active academics fulfilling such a formal leadership position,[3] varying in level of formal authority, for a specific term, not professional administrators. Participants were randomly selected using a fixed interval for sampling from a list of all academic formal leaders within the schools participating in this study. Those selected were invited by email and reminded once. Out of 63 invitees, 32 agreed to participate (of whom one did not show up at the interview and one never confirmed the appointment), 13 declined due to a lack of time and one due to sick leave, and 17 did not respond to the invitations. This resulted in a sample of 30 participants. The sample's composition is balanced in terms of gender (16 male,

14 female participants) and type of position (17 educational, 13 non-educational), with an average experience in administrative/management positions of 9.42 years (SD = 6.327) and is equivalent for participants and non-participants.[4]

Procedure

Participants were presented with a case featuring a fictional university department about which they had to respond to a series of eight scenarios, introducing different contextual manipulations. An information sheet provided background information of the department (educational programs, number of staff and students, institutional arrangements). For each scenario, respondents were asked what they would do in this situation and which actors they would engage if applicable, comparable to verbally answering an open-ended survey question. After completing the vignettes, the interview continued in a semi-structured fashion to discuss how participants interpreted the scenarios and came to their responses. Sharing examples from their own experience was encouraged. These data can illustrate and provide additional insights in the mechanisms underlying the findings.

Measurement

Dependent variable

To test behavioural adaptation, we measured number of intended leadership behaviour types in response to the scenarios. Specifically, participants were asked: "Which actions would you undertake, and if applicable, which stakeholders would you involve?" Types of leadership behaviour were coded using the eight leadership roles matching various leadership behaviours from the model by Denison et al. (1995), creating a 9-point scale ranging from no intended leadership behaviours to eight different types of intended leadership behaviour. Descriptions and example statements of these categories are presented in Appendix B.

Independent variables

Contextual ambiguity is operationalized as the level of tension between simultaneous demands present in situations in which leaders have to act. To incorporate such tension, situations described in the scenarios always presented two issues to be dealt with, which vary on similarity or difference between interests at stake. Based on the conceptualization of contextual ambiguity in this article, manipulations of contextual ambiguity consisted of variations on a) the timeline

and b) the source of the demands leaders are dealing with. Regarding timeline ambiguity, the scenarios involve issues with shorter-term interests (staffing shortage and immediate additional teacher absence) and longer-term interests (program future viability and strategic career choice). Regarding source ambiguity, variation is based on the issues' main interest for the organization as a whole (keeping program staffed and ensuring program future viability) and for individual organizational members (employees' burnout and sabbatical, and employee's strategic career choice). More ambiguity is present when the two demands are more different on a dimension, since it could be argued that it is harder to combine more different demands, making the situation more ambiguous to deal with. Table 3.2 shows how the different combinations of issues are linked to the scenarios.

Formal authority is operationalized as the level of decision-making authority residing in formal leadership roles. In the vignettes this takes on the values of presence (scenarios 1-4) or absence (scenarios 5-8) of formal authority regarding financial, personnel, and policy decisions for the leader in the vignette, as presented to the respondent via role descriptions.

The three variables combined form two sets of four scenarios (a 2x2x2 design), which is visualized in Table 3.2. Operationalization of all independent variables in the vignette materials is presented in Box 3.1 below. For clarity, the two simultaneous demands are separated as Issue 1 and Issue 2 in line with Table 3.2.

Analysis

The recorded interviews were transcribed and responses to each scenario were systematically coded for leadership behaviour. The coding procedure had a deductive character, drawing on the definitions and descriptions of Denison et al. (1995) to code answers per scenario. At the start of the coding process, several transcripts were read to get a gist of concrete examples of each code. With this additional coding information, all observations were coded according to the eight categories of Denison et al. (1995) and received a numerical value corresponding to the number of different coded categories. A coding memo was kept to record and track decisions on how to code particular types of answers to ensure consistency throughout the process. We tested for reliability by evaluating the intra-coder reliability with an interval of roughly a year so coding the data was without prior knowledge of the original coding, while the same coding procedure could be followed. We selected at random 30 observations, covering responses from interviews early, half-way, and at the end of data collection and original coding.

In line with the measure used as the study's dependent variable, the reliability test focused on the number of types of behaviours as coded in the original coding and in the recoding. Reliability is higher when there is more overlap between the number of coded behaviours per observation in both rounds. The result of this test is intra-class correlation (ICC) = 0.868 (95% CI 0.726–0.937). This indicates that coding is consistent and we can have confidence in the reliability of the dependent variable's coding.

The within-person design creates a multilevel data structure, with observations (n=240) nested in persons (n=30). Multilevel modelling provides the opportunity to test how variations in context elicit different choices by the same participant, controlled for between-person differences. Multilevel linear regression models were estimated in HLM 8. Fixed-effects models were estimated, since the hypotheses only focus on within-person variance and between-person unexplained variance is controlled for (Snijders & Bosker, 1999). Due to the relatively small number of participants, model parameters were estimated using restricted maximum likelihood (RML) estimation to extract reliable variance estimates and additionally robust standard errors were used (Hox et al., 2018; Maas & Hox, 2004).

Table 3.2. Operationalization formal authority and dimensions contextual ambiguity in scenarios

		More formal authority (1)		**Less formal authority (0)**	
		Contextual ambiguity: Timeline		**Contextual ambiguity: Timeline**	
		Less ambiguous (0)	**More ambiguous (1)**	**Less ambiguous (0)**	**More ambiguous (1)**
Contextual ambiguity: Source	**Less ambiguous (0)**	**Scenario 1** Issue 1: Short term + department Issue 2: Short term + department	**Scenario 2** Issue 1: Short term + department Issue 2: Long term + department	**Scenario 5** Issue 1: Short term + department Issue 2: Short term + department	**Scenario 6** Issue 1: Short term + department Issue 2: Long term + department
	More ambiguous (1)	**Scenario 3** Issue 1: Short term + department Issue 2: Short term + employee	**Scenario 4** Issue 1: Short term + department Issue 2: Long term + employee	**Scenario 7** Issue 1: Short term + department Issue 2: Short term + employee	**Scenario 8** Issue 1: Short term + department Issue 2: Long term + employee

Box 1. Vignette materials

Introduction role 1

In the next four scenarios, you are **head of department** of Political Science. Together with the director of education and supported by the financial manager you make up the board, with whom you have weekly meetings. In your position, you are responsible for the day-to-day wellbeing and the strategy of the department and you are responsible for the budget. **In your position, you have the capacity to decide about hiring personnel and you have the last say in policy decisions of your department.**

Scenario 1

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: At the same time you are preparing the visitation of the educational programs, which has to be reaccredited in the coming months. You also need your staff to prepare all documents and meetings. You need your teaching staff for various matters, but time is limited and work pressure high.

Scenario 2

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: At the same time, you are working on the development of additional interdisciplinary elements in your educational programs, to secure future viability. To be able to receive structural financial funding from the school, you have to materialize these developments in the coming months. Then you will be able to use them to promote your programs among potential future students from next year onwards.

Scenario 3

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along

accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: Your teaching staff already experience high work pressure, two coordinating teachers are on sick leave due to burnout. It has proven to be difficult to find new teachers to fill up the teaching hours and unburden other teaching staff. A third coordinating teacher has given you notice that she has been invited by an excellent research institute in the United States to spend a sabbatical during the second semester. Her teaching tasks would have to be reallocated to someone else.

Scenario 4

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: At these times of scarcity and high work pressure, a coordinating teacher in your bachelor program has told you that he has been offered the opportunity to make a television show on social science and research. This would generate a lot of positive attention for himself and his career. He would also be less available for teaching, although he teaches a core module in the program.

Introduction role 2

In the next four scenarios, you are **program director of bachelor studies** of Political Science. In your position, you are responsible for quality of the Dutch bachelor program. Besides you are the direct contact person for teaching staff. **In your position, you do not have the capacity to decide about hiring personnel, the board of the department decides upon those issues.**

Scenario 5

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: At the same time you are preparing the visitation of the educational programs, which has to be reaccredited in the coming months. You also need your staff to prepare all documents and meetings. You need your teaching staff for various matters, but time is limited and work pressure high.

Scenario 6

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: At the same time, you are working on the development of additional interdisciplinary elements in your educational programs, to secure future viability. To be able to receive structural financial funding from the school, you have to materialize these developments in the coming months. Then you will be able to use them to promote your programs among potential future students from next year onwards.

Scenario 7

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: Your teaching staff already experience high work pressure, two coordinating teachers are on sick leave due to burnout. It has proven to be

difficult to find new teachers to fill up the teaching hours and unburden other teaching staff. A third coordinating teacher has given you notice that she has been invited by an excellent research institute in the United States to spend a sabbatical during the second semester. Her teaching tasks would have to be reallocated to someone else.

Scenario 8

Issue 1: The bachelor programs of your department will grow more than expected in the coming academic year, but the budget will not yet grow along accordingly. It becomes very difficult to arrange the allocation of staff for all teaching tasks.

Issue 2: At these times of scarcity and high work pressure, a coordinating teacher in your bachelor program has told you that he has been offered the opportunity to make a television show on social science and research. This would generate a lot of positive attention for himself and his career. He would also be less available for teaching, although he teaches a core module in the program.

3.4 Results

Descriptive statistics

The dataset consists of 240 observations (8 observations each for 30 participants). In total, a leadership behaviour category was coded 635 times. Participants' responses per scenario involved multiple leadership behaviour categories, with a mean of 2.65 (SD=1.098) per scenario. Participants would respond to scenario 3 with the highest average number of leadership behaviour categories (M=3.50; SD=1.225), to scenario 8 with the lowest average number of categories (M=1.93; SD = 0.907) (Table 3.3).[5] In only one observation, no leadership behaviour was present in the participant's response (scenario 1). Two or three types combined was most common, in respectively 75 (31.3%) and 81 (33.8%) observations (Table 3.4). Behaviours matching the innovator and producer categories were present least often, whereas monitor and facilitator behaviours were very common and coordinator behaviours were the most predominant (Table 3.5).

Table 3.3. Descriptive statistics number of leadership behaviour categories by scenario (n = 240)

Scenario	Mean	SD	Min	Max	N
1	2.93	.980	0	5	30
2	3.03	1.273	1	6	30
3	3.50	1.225	1	6	30
4	2.27	.868	1	4	30
5	2.60	1.003	1	5	30
6	2.77	.817	1	5	30
7	2.20	.847	1	4	30
8	1.93	.907	1	4	30
Total	2.65	1.098	0	6	240

Table 3.4. Number of leadership behaviour categories in responses per observation (n = 240)

No. of leadership behaviour categories	Frequency	% of observations
0	1	.4
1	34	14.2
2	75	31.3
3	81	33.8
4	38	15.8
5	8	3.3
6	3	1.3
Total	240	100

Table 3.5. Leadership behaviour categories mentioned (n = 240)

Leadership behaviour category	Frequency	% of observations
Innovator	26	10.8
Broker	80	33.3
Producer	18	7.5
Director	78	32.5
Coordinator	162	67.5
Monitor	99	41.3
Facilitator	114	47.5
Mentor	58	24.2
Total	635	100

Multilevel analyses

Table 3.6 presents the multilevel models. A baseline model (not displayed) including only a random intercept was estimated to calculate the ICC. The ICC-value of 0.210 indicates that 21% of the total variance can be attributed to level 2 (the participant and his/her characteristics). The baseline model shows that intercepts vary between participants, since level-2 variance of 0.255 ($p<0.01$) is highly significant. Gender and years of experience in administrative/management positions are not significant to explain the variance and do not affect the estimates of scenario-level variables. Since the within-person design also controls for between-person variation, these variables are not included in the models below.

To test the hypotheses, three models have been estimated for each ambiguity variable. Models 1 and 4 test hypothesis 1, including only either timeline ambiguity or source ambiguity, respectively; models 2 and 5 add the direct effect of formal authority; and lastly models 3 and 6 include the interaction terms to test hypothesis 2. Finally, model 7 includes all independent variables, the interaction terms, and a three-way interaction to assess the combined effect.

Timeline ambiguity

In model 1, timeline ambiguity has indeed a significant but negative effect on the number of leadership behaviours mentioned by participants (B=-0.308, SE=0.101, $p<0.01$). When the demands on a leader are more different and include both shorter-term and longer-term interests (more ambiguity), leaders use fewer types of leadership behaviour. When controlling for formal authority (model 2), timeline ambiguity retains its negative effect. The direct effect of formal authority is positive and significant, indicating that the number of leadership behaviours are 0.558 higher in scenarios with more formal authority (SE=0.122, $p<0.01$). Model 3 includes the interaction of timeline ambiguity with formal authority to test hypothesis 2. As hypothesized, there is a significant moderating effect of formal authority on the effect of ambiguity (B=–0.517, SE=0.164, $p<0.01$). In scenarios with more ambiguity, fewer types of leadership behaviour are used, but only when leaders have more formal authority (–0.050 when formal authority is 0, -0.567 when formal authority is 1). In other words, leaders with formal authority demonstrate more types of leadership behaviour but in the context of ambiguity their repertoire narrows significantly (Figure 3.2).

Table 3.6. Multilevel linear regression models with number of leadership behaviour categories as a dependent variable ($n_{observations} = 240$, $n_{participants} = 30$)

	Model 1		**Model 2**		**Model 3**		**Model 4**		**Model 5**		**Model 6**		**Model 7**	
FIXED	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
Mean/intercept	2.808**	.125	2.529**	.126	2.400**	.134	2.833**	.127	2.554**	.128	2.683**	.138	2.600**	.180
Timeline Ambiguity	-.308**	.101	-.308**	.101	-.050	.092							.167	.177
Source ambiguity							-.358*	.140	-.358*	.140	-.617*	.164	-.400*	.198
Formal authority			.558**	.122	.817**	.161			.558**	.122	.300†	.168	.333†	.185
Interactions														
Timeline ambiguity *Formal authority					-.517**	.164							-.067	.258
Source ambiguity *Formal authority											.517**	.171	.967**	.191
Timeline ambiguity *Source ambiguity													-.433	.270
3-way interaction													-.900**	.360
RANDOM	σ^2	**SD**	σ^2	**SD**	σ^2	**SD**	σ^2	**SD**	σ^2	**SD**	σ^2	**SD**	σ^2	**SD**
VAR(e_{ij})	.936	.968	.851	.922	.836	.914	.927	.962	.841	.917	.826	.909	.722	.850
VAR(u_{0j})	.258**	.508	.268**	.518	.270**	.520	.259**	.509	.270**	.519	.271**	.521	.284**	.533
Model fit	**Fit**	**par**	**Fit**	**par**	**Fit**	**par**	**Fit**	**par**	**Fit**	**par**	**Fit**	**par**	**Fit**	**par**
Deviance	703.0	2	682.6	2	680.8	2	700.9	2	680.3	2	678.4	2	651.2	2
Explained variance	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$	$\mathbf{R^2}$	$\mathbf{R^2_{S\&B}}$
R^2 within-person	.024	.016	.113	.078	.128	.089	.033	.023	.123	.085	.139	.096	.247	.171
R^2 between-person	-.011	-.000	-.051	.001	-.059	.001	-.016	.000	-.059	-.001	-.063	.002	-.114	.002
R^2 total	.016		.078		.089		.023		.085		.096		.171	

† p < .10; * p < .05; ** p < .01

Source ambiguity

Model 4 presents a second test for hypothesis 1, involving the effect of source ambiguity such as competing demands from the organization and individual employees. As in model 1, an ambiguous context significantly lowers the number of leadership behaviours (B=–0.358, SE=0.140, $p<0.05$). Again, formal authority has a positive significant effect (B=0.558, SE=0.122, $p<0.01$) on the number of leadership behaviours (model 5). A significant interaction between formal authority on the effect of ambiguity (B=0.517, SE=0.171, $p<0.01$) is again found (model 6), but the interaction is in this case positive. The effect size of ambiguity is then -0.617 when formal authority is 0, but -0.100 when formal authority is 1. As Figure 3.3 also shows, having more formal authority buffers the negative effect of ambiguity on the number of leadership behaviours.

Model 7 adds the interaction between both ambiguity dimensions and the three-way interaction between all independent variables. This combined effect has a significant negative coefficient (B=-0.900, SE=0.360, $p<0.01$). To facilitate interpretation, Figure 3.4 plots the three-way interaction. It shows the mean number of leadership behaviour categories increases when leaders have more formal authority for each level of contextual ambiguity. The moderating effect is strongest when timeline ambiguity is low and source ambiguity is high (line 3); for the other levels of ambiguity the moderator has largely the same effect. High levels of both ambiguity variables elicit the fewest leadership behaviours in both low and high formal authority conditions (line 4), consistent with the findings of the analyses for the two ambiguity dimensions separately. Only line 3 does not fit the pattern perfectly, as more formal authority stimulates more different types of behaviour in the high source ambiguity condition as compared to the low source ambiguity condition. In general, however, the picture that more ambiguity reduces the number of leadership behaviour types is repeated and the result appears robust throughout the models. The sizes of the effects of the three independent variables are relatively small: between one-third (for timeline and source ambiguity) and one-half (for formal authority) point change on the 9-point scale of leadership behaviour categories, which amounts to about a one-third to half a standard deviation change in this outcome variable. In the models with interactions, the effect (size) of one variable depends on the value of the other variable. Again, effect sizes are mostly small (one-third standard deviation change in the outcome variable) to moderate (three-fourth standard deviation change).

Based on these analyses it can be concluded that in more ambiguous situations, leaders use fewer types of leadership behaviour. For both dimensions of ambiguity, a significant effect on leadership behaviour was found, but in the opposite direction of the hypothesis. Hypothesis 1 is therefore not supported. Looking at the bivariate correlations between the ambiguity variables and number of leadership behaviours, we can derive indications in which way the repertoire narrows.

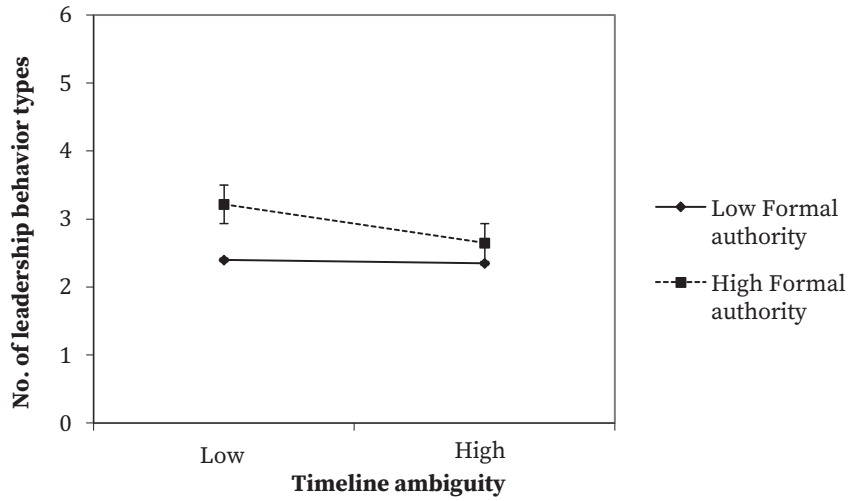

Figure 3.2. Predicted number of leadership behaviour types conditional on timeline ambiguity and formal authority

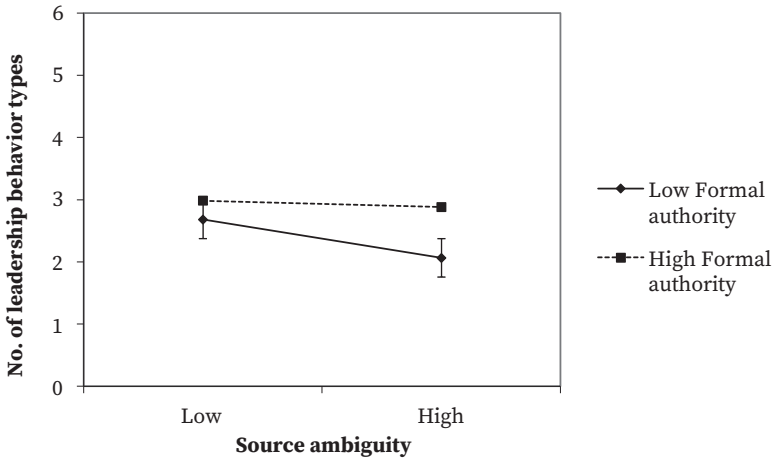

Figure 3.3. Predicted number of leadership behaviour types conditional on source ambiguity and formal authority

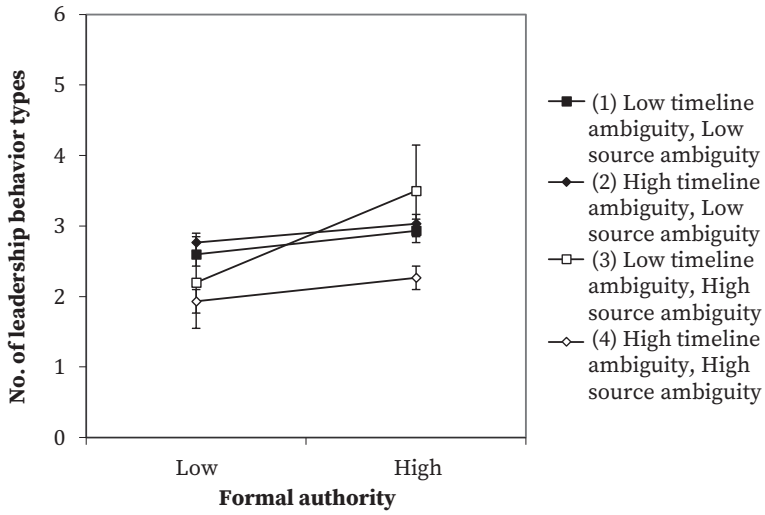

Figure 3.4. Predicted number of leadership behaviour types conditional on timeline ambiguity, source ambiguity, and formal authority

When timeline ambiguity is high, the likelihood increases that the broker ($r=-0.159$, $p<0.05$), coordinator ($r=-0.356$, $p<0.01$), and monitor ($r=-0.212$, $p<0.01$) behaviours are used significantly less often. The types of leadership behaviour that are more likely to occur less frequently in source-ambiguous situations are again broker ($r=-0.318$, $p<0.01$) and monitor ($r=-0.212$, $p<0.01$), as well as director ($r=-0.196$, $p<0.01$) and innovator ($r=-0.241$, $p<0.01$). Leaders with formal authority demonstrate more types of leadership behaviour. Furthermore, the extent to which leaders' behaviour adapts to the context is influenced by the level of formal authority. Therefore, hypothesis 2a is supported – being aware that the relationships specified under hypothesis 1 have the reverse direction. There is a significant difference between the two dimensions of ambiguity, namely how they affect behaviour depending on leaders' level of authority. In the case of timeline ambiguity, ambiguity reduces the number of behaviours for leaders with formal authority; while in the case of source ambiguity, the ambiguity narrows the behaviour for leaders with less authority. This requires a deeper look into the connection between the context variables and leadership behaviour. Looking at bivariate correlations, we can indeed observe that certain types of behaviour are somewhat more common in case of formal authority, such as broker ($r=0.247$, $p<0.01$), director ($r=0.178$, $p<0.05$), and mentor ($r=0.156$, $p<0.05$), but the correlation is far from exclusive.

It thus seems that the source and timeline ambiguity offer different challenges and offer a different context for leaders' choices. The qualitative interview data can shed some light on why this would happen. As illustrated below, in the case of more ambiguity leaders may be distancing themselves from certain issues, and thereby reducing the overall number of different types of leadership behaviour.

Interview data

Since the data point in the opposite direction of hypothesis 1, questions arise regarding the perception of contextual ambiguity by leaders. After having completed all vignettes, participants gave varying answers to a manipulation check question asking which scenario they experienced as the most difficult. While explaining what makes some scenarios and similar situations in their own organizations difficult to handle, many participants referred to uncertainty as to how competing demands should be prioritized. When an issue is clearly more central to the organization's strategy, it becomes easier to make decisions, because such an overarching principle provides guidance in dealing with competing demands and reduces uncertainty of interpretation and, hence, ambiguity. Yet, consistent with the presented results, no significant correlation existed between the scenario that participants evaluated as most difficult and the scenario for which most behaviour types were reported.

A related issue stems from the pressure of having to satisfy multiple needs with limited resources. Instead of a combination of issues involving varying interests, more of the same type of interests in concurrent demands could cause more pressure, leading to uncertainty concerning how to solve the puzzle. Especially when the pressure is high due to formal requirements that limit room to manoeuvre and additional pressure on resources accumulates, simply prioritizing by consulting the organization's strategy is often not feasible. Under such circumstances, deciding upon dropping some demands is not possible. This pressure from a perceived lack of leeway coincided with the low ambiguity conditions. Confirming the experimental data, the semi-structured interview data illustrate that leaders sometimes experience that there is no choice but to pursue both simultaneous demands, which causes more pressure to make it work somehow and try through multiple types of action.

On the other hand, in the scenarios that had a longer-term issue combined with a non-negotiable shorter-term issue, leaders considered the longer-term interests as important, but they also argued these issues could be postponed or not performed.

Similarly, a demand of an individual employee competing with an organizational issue was easier to sacrifice than another organizational demand – although many participants commented on the importance of providing opportunities for employees to develop themselves, for both the individual and the organization. Nevertheless, participants interpreted the dilemma situations in the scenarios as such, making the degree of choice a consideration in making sense of a way out of the ambiguity. Saying no or not taking action, as a consequence, results in fewer types of leadership behaviour and provides further explanation of the findings.

3.5 Discussion

Many recent studies examine the effect of leadership behaviour on organizational outcomes, while considerably less attention has been paid to the issue of what shapes leadership behaviour in the first place. This article reported on a within-person vignette study testing hypotheses about leadership behaviour adaptation to contextual ambiguity. The analyses show that leaders adapt their leadership behaviour to changing circumstances, such that they use fewer types of leadership behaviour in more ambiguous situations. This goes against the theoretical expectations. Based on participants' considerations in responding to the vignettes, this finding can be explained by how leaders interpret ambiguous situations with competing demands: in light of high pressure on scarce resources, leaders seem to prioritize among these demands. Several theoretical as well as practical implications follow from this finding.

What unfolds can be understood as a simplification process: to make a complex reality manageable, leaders focus their efforts on limited demands that are deemed most important at that moment. Much research on leadership puts a form of simplification central to leadership by means of focusing on transformational leadership. Developing, sharing, and sustaining a vision are central to leadership in this line of research (e.g., Jensen et al., 2019; Wright et al., 2012). A vision presents an image and understanding of a future that is strived for through the organization's goals, thereby providing direction to organizational members. It could be argued that the simplification by leaders in our study to some extent has an aim at providing direction to others around them, since several leaders stated that their staff members look at them for decisions on difficult issues. Given that our research focuses on how leaders deal with ambiguous situations, however,

the simplification that showed in our findings refers mainly to the parallel aim of making a situation more manageable for the leaders themselves.

While delimiting the objects of their leadership and in order to gain control, they narrow the range of their leadership behaviours. In some cases this may mean sacrificing strategic long-term goals. Our interview data prompt the understanding that leaders tend to interpret demands relating to strategic longer-term considerations as less urgent when pressure is high, which have to be postponed to ensure shorter-term continuity. Also the bivariate correlations between ambiguity dimensions and leadership behaviours show a drop in the more strategic longer-term oriented behaviours (innovator, director, broker). Yet attending to both objectives is important and necessary (March, 1991; Murphy et al., 2017; O'Reilly & Tushman, 2013; Raisch & Birkinshaw, 2008; Turner et al., 2013). Strategic development and innovation involves risk-taking, which requires some slack and room for manoeuvre regarding resources (Van de Walle, 2009). If leaders do not experience that they can opt-out of, drop, or postpone a demand, because they have been made obligatory, those issues could take up all resources. Consequently, leadership behaviour becomes narrow and moves away from facilitating strategic progress toward management of inertia. In the public sector, the dynamics of democratic legitimation and bureaucracy tend to favour stability over change (Getha-Taylor et al., 2011; Head, 2010), driving leaders to take this path. Against this background and in individual cases, such decisions might make sense, but it could produce a perverse and damaging pattern in the long run if strategic development is insufficiently attended to (Smith, 2014).

This indicates that the observed simplification does not necessarily bear resemblance to the vision-based simplification of transformational leadership. Yet leaders also indicated that drawing on their organizational strategy helped them to navigate dilemmas. In this light, it is relevant to consider the literature on strategic planning and management (Bryson et al., 2010; George, Walker et al., 2019) as it could offer an additional perspective on how leaders can deal with ambiguity and strategic interests. Common practices of this approach to strategy formulation are analysing the environment, identifying purpose and direction, and setting goals accordingly. On a behavioural level, the director, broker, monitor, and coordinator roles of the leadership behaviour repertoire (Denison et al., 1995) link to such strategic managerial practices. Strikingly, those are the types of behaviours that are more likely dropped from the repertoire amid ambiguity, as our data relate.

As an alternative to understanding this as urgency-based prioritizing as mentioned above, this may indicate that leaders fall back on personally preferred styles of leadership behaviour when pressure and ambiguity are high. Individual leaders' default options of handling situations may become more dominant at the expense of strategic behaviour in the use of the repertoire, as we see a diffuse pattern of how leaders narrow their repertoire of leadership behaviour: different leaders fall back on different types of behaviour. Preparing a clear and shared strategy in advance could provide leaders with a supportive structure to fall back on when conditions get more difficult and ambiguity increases. Further research is warranted to better understand how leadership behaviour can foster strategic interests amid ambiguity.

Although the principle of "requisite variety" (Ashby, 1952) does not seem to explain the pattern, the adaptation-to-context hypothesis should not be rejected. Our data show clearly that within-person variation in leadership behaviour exists. Public management and leadership theory often assumes contextual effects and situational variation but generally only provides indirect tests based on large between-person samples (e.g., George, Van de Walle et al., 2019; Hansen & Villadsen, 2010; Hooijberg, 1996). Moreover, the principle of "requisite variety" is based on effective behaviour and is then prescriptive. Not observing the behavioural complexity as proposed, prompts the question what this means for leadership in ambiguous contexts. We encourage further research employing within-person designs to explore further how leaders adapt their behaviour to various contextual factors.

Concerning structural impact of formal authority, our findings show a stimulating, enabling influence on leadership behaviour. Leaders with more formal authority have more options at their disposal to engage in different types of leadership behaviour. The leadership positions clearly ask of position holders to act in the interest of the organization, whereas financial and human resource responsibilities are not automatically part of their role (Gronn, 2002) and constrain their room to act. Since leaders without such authority are regularly confronted with requests by individuals that produce tension with organizational interest, often additional people with the needed authority have to be involved. In organizations where responsibilities and capacities are distributed between multiple organizational members, leaders may be constrained in their ability to address these complex demands.

Implications for research and practice follow. It seems wise to keep in mind who should be able to solve which types of issues independently and which types of issues

are better served when more actors are involved to safeguard careful action with appropriate attention for various interests at stake (checks and balances). Deliberate choices based on these considerations can then be translated in the distribution of formal authority among organizational members. At the same time, leaders navigating the complexities of distributed formal authority should be aware of the interdependencies and put energy in fostering collaborative relationships with organizational members with and without additional formal authority. Further research on the interplay between formal authority and distributed leadership should take this into consideration, to provide additional insight in how distributed leadership agency by organizational members is enabled and/or hindered by dispersing responsibilities and authority (Groeneveld & Van de Walle, 2011; Shamir, 1999).

Limitations

This study intended to test hypotheses about leadership behaviour adaptation to context. Several limitations should be kept in mind. Since with vignettes actual behavioural adaptation is not observed but approximated through statements of intended behaviour, conclusions should be treated with caution. How a participant interprets and formulates intended behaviour in a vignette interview likely differs from behaviour in a situation that requires the participant to act, since the motivational cues involved are not identical (Jenkins et al., 2010). Nevertheless, a vignette study can provide better insight in plausible reactions if scenarios resemble participants' own actual situations. During the interviews, participants referred to their own practice and gave examples about how they had dealt with similar issues as those in the vignette, such as growing educational programs while facing staff shortages due to burn-out or other personal circumstances, or developing new or restructuring existing educational programs. This signals that the measurement provides a realistic indication of how participants would behave in actual situations.

Second, our measurement of contextual ambiguity is limited. Two dimensions of contextual ambiguity were included, although others could be relevant. Keeping some variables constant was necessary, since our methodology thwarts a larger number of scenarios per participant or a much larger sample necessary to cover all possible set combinations and set effects (Atzmüller & Steiner, 2010). To be able to assess the effects of the variables included, we decided to restrict the number of factors in the design. Moreover, in line with prior research on goal ambiguity (Chun & Rainey, 2005; Jung, 2011) contextual ambiguity was approached as an

objective characteristic of leadership situations, whereas perceived ambiguity was not measured. These can diverge, as our qualitative data indicate. What could be a tension or dilemma on paper, might not be perceived as such and vice versa. Davis and Stazyk (2015) have also pointed out that ambiguity has multiple faces, producing not only uncertainty and constraints, but also room for manoeuvre. Differences in how leaders interpret ambiguity have implications for theory. Ambiguity is an elusive concept, which makes it challenging to study. This is further enhanced by the possible divergence of objective and perceived evaluations of the phenomenon. Its omnipresence and challenges for public management, however, encourage further research whereby perceptions should be taken seriously given their potential effects on behaviour (James & Jones, 1974; Weick et al., 2005).

Third, our dependent variable focused on the number of different types of leadership behaviour. While this adds to the literature by providing a direct test of behavioural adaptation to context, which had been assumed in prior research, it leaves open the question which behaviours are more or less likely in case of increasing contextual ambiguity. The study was designed to capture variety, which was observed. Exploration of correlations between ambiguity and types of behaviour showed a mixed inconclusive picture. Follow-up studies could delve deeper into the question of which behaviours are adopted in which type of circumstances, and why.

A final trade-off concerns the order in which scenarios are presented to participants. Since the number of respondents was limited due to feasibility, the number of combinations in which scenarios could be ordered exceeded the sample size. Randomizing the vignette order would not allow us to control for possible order effects, since not all combinations could be administered and therefore order effects could not be fully checked (see also Raaphorst et al., 2018). Vignette order was therefore kept constant for all participants. Robustness checks were performed by running all models excluding the first and last scenario for each participant to assess whether learning and tiresomeness by participants might affect the results. All models showed coefficients that had the same direction as the models in Table 3.6. In some models, variables had the same direction but were not significant, which could be explained by the decrease in statistical power due to the smaller number of observations. Model 7 could not be estimated, due to singularity issues. The results were therefore largely supported and permit the same conclusions.

To test the robustness of our findings and overcome some limitations, further research should continue this line of research. We suggest adopting different

methods to address the measurement of the dependent and independent variables. Moreover, our study has aimed at theoretical generalizability following a typical-case logic instead of at statistical generalization. Therefore, the external and ecological validity of the relationships should be tested with larger samples from different populations. Although the current empirical setting has contextual ambiguity and distributed authority patterns that are increasingly typical for many other public organizations, and therefore fits the aim of theoretical generalization, its rotating management by professionals is less common. In such a context of contested formal authority and shared governance – a combination that has spurred the notion that managing academics is like herding cats (Brown & Moshavi, 2002) – it may take more of a leader to navigate ambiguous decision-making situations. After all, trade-offs are likely perceived differently among professionals and autonomous decision making on behalf of a primus-inter-pares is not very accepted. This could imply that more types of behaviour have to be used in comparison with settings where hierarchical position is more accepted as basis of authority and managers are expected to act as strategic leaders. Further research should assess whether this characteristic influences the found relationships.

3.6 Conclusion

In many public organizations, ambiguity is widespread and, per this study, not without consequences for leadership. Formal authority can enable leaders to take action when situations are ambiguous – or give them the mandate to prioritize and leave some issues aside. These findings advance our understanding of leadership in ambiguous organizational contexts and raise important questions for future research explaining leadership behaviour and implications for public management professionals. Further research to investigate the impact of organizational context is therefore not only of theoretical interest, but also of practical value.

Notes

1. A distinction must be made with situational leadership, which mainly concerns adaptation of leadership to an employee's task maturity rather than to organizational context factors more broadly (Graeff, 1997; Thompson & Vecchio, 2009; Yukl, 2008).
2. Despite the opposite trend of increasing accountability pressure that enhances bureaucracy, which is also linked to NPM-inspired reforms (Diefenbach, 2009; Lawton et al., 2000). In the university sector, Bess and Goldman (2001) refer to the increase in managerial logic and bureaucratization, moving away from more loosely coupled systems. We would argue that NPM-inspired bureaucratization implies an accumulation of different steering instruments leading to more complex structures within universities.
3. We recognize that leadership behaviour is not reserved for organizational members performing formal roles (Gronn, 2002). Academe's tradition of rotating primus-inter-pares leadership, in which administrative roles are taken up by professionals for a limited term rather than by managers (Bess & Goldman, 2001; Gronn, 2002), further enhances this. To test our hypotheses using hypothetical scenarios, however, it is helpful to recruit participants with experience in the roles in the scenarios, since they will be better able to put themselves in the position of the vignette's protagonist.
4. Out of 63 invitees, 35 were men (55.5%) and 28 had non-educational positions (44.4%). Out of 30 participants, 16 were men (53.3%) and 13 had non-educational positions (43.3%).
5. No correlation existed between the order of scenarios and the number of types of leadership behaviour.

Chapter 4

Who are leading? A survey of the role of organizational context in explaining leadership behaviour of managers and non-managerial employees in public organizations

Abstract

Changing bureaucratic structures and increasing collaboration within public service delivery create new questions for leadership. With formal authority becoming more dispersed and various actors increasingly involved, revised expectations as to who contributes to organizational coordination are emerging. We investigate how both managers and non-managerial employees use leadership behaviours and how characteristics of the organizational context affect their engagement in leadership. Analyses of survey data collected among public servants (n = 1,266) in the Netherlands show that employees both with and without formal leadership positions demonstrate more leadership behaviour in situations of higher environmental complexity, but the latter group faces more bureaucratic constraints.

van der Hoek, M., & Kuipers, B. S. (2022). Who are leading? A survey of the role of organizational context in explaining leadership behaviour of managers and non-managerial employees in public organizations. *Public Management Review,* Advance online publication. https://doi.org/10.1080/14719037.2022.2160005

4.1 Introduction

The public management literature abounds with leadership research on the behaviour and style of individual managers in formal leadership positions (Ospina, 2017; Vogel & Masal, 2015). The emphasis on leadership by those in formal leadership positions matches the typical bureaucratic character of many public organizations. However, now that 'boundaryless' and post-bureaucratic forms of organizing are becoming increasingly common (Groeneveld & Van de Walle, 2011; Shamir, 1999; van der Voet & Steijn, 2021), the link between leadership and formal hierarchical position is becoming less straightforward. This is visible in the literature on leadership in collaborative governance (e.g., Crosby & Bryson, 2005, 2010; Sørensen et al., 2017), but also applies when taking an intraorganizational perspective on leadership behaviour by individual organizational members. This trend has implications for leadership within organizations: not only managers as formal leaders, but increasingly also for non-managerial organizational members who acquire a role in organizational leadership (Jakobsen et al., 2021; Kjeldsen, 2019; Tian et al., 2016; Woods et al., 2004).

In line with these trends, researchers increasingly give attention to other conceptualizations of leadership. Ospina (2017) draws attention to relational theories of leadership with a system-centred approach, such as distributed and collective leadership (e.g., Bolden, 2011; Currie et al., 2009; Fitzgerald et al., 2013; Zeier et al., 2021). While Ospina argues that such approaches offer new opportunities to analyse leadership in complex environments, she also states that person-centred research continues to be relevant, especially when framed in the light of insights gained from distributed and collective leadership research. In public management, such person-centred leadership research typically focuses on transformational leadership by formal managers (Jacobsen & Andersen, 2015; Ospina, 2017; Vandenabeele et al., 2014; Vogel & Masal, 2015). However, as formal authority and responsibilities are devolved and spread throughout organizations, a range of organizational members become involved and are together expected to participate in the process of shaping leadership within an organization. To relate to these shifts in organizing, person-centred leadership needs to relax the constraint of focusing only on formal leaders.

Since distributed forms of leadership depend on the activities of a broad range of actors, the question emerges as to under what conditions will organizational members contribute to this shared task by exercising leadership behaviour.

Considering the development of 'boundaryless' forms of organizing, linked to these changing leadership demands, both the bureaucratic organizational structure and environmental complexity are of particular interest. These context factors may affect the room for manoeuvre as well as the necessity for leadership (Van der Voet, 2014; Van der Voet et al., 2015, 2016). While several studies have analysed how contextual factors affect leadership and managerial behaviour (George, Van de Walle et al., 2019; Hansen & Villadsen, 2010; Nielsen & Cleal, 2011; Schmidt & Groeneveld, 2021; Stoker et al., 2019; van der Hoek, Beerkens et al., 2021), the majority of this research overlooks the role of non-managerial employees in leadership. To what extent holding a formal position makes a difference in the leadership behaviour exhibited, and how characteristics of the public organizational context play a role in how managers and non-managerial employees enact leadership, warrants examination. Therefore, in this study, we broaden the scope of the person-centred approach by also including organizational members without formal leadership positions.

To summarize, this study examines these issues in order to advance our understanding of leadership at the individual level in public organizations. We aim to explain differences in the leadership behaviour of organizational members with and without formal leadership positions, test contextual effects, and explore variation in types of leadership behaviour in light of these circumstances. Our research seeks to answer the question: *How can aspects of the public organization context explain leadership behaviour by individuals with and without formal leadership positions?* We test hypotheses using survey data collected among Dutch public sector managers and non-managerial employees (n = 1,266) in four sectors (universities, university medical centres, police, and municipalities).

This study aims to contribute to the literature on leadership in public organizations in three ways. First, by illustrating a revised approach to person-centred leadership research with a focus on the behaviours of non-managerial-employees in addition to formal managers. While distributed concepts of leadership are gaining currency (e.g., Bolden, 2011; Currie et al., 2009; Fitzgerald et al., 2013; Zeier et al., 2021), person-centred leadership research with a broader focus remains limited and needs to catch up and reflect developments in the public sector that present new challenges for leadership. Considering not only managers with formal leadership positions, and focusing on behaviour rather than formal aspects such as responsibilities and functions, will provide more insightful comparisons. The second contribution concerns the use of a repertoire conceptualization of

leadership behaviour (van der Hoek, Groeneveld et al., 2021). Adopting such a repertoire perspective is particularly helpful when assessing leadership behaviour while anticipating broader participation within organizations: focusing on one aspect runs the risk that it is typically associated with formal authority. Approaching leadership behaviour within organizations in a comprehensive way will facilitates a more nuanced explanation of differences in levels of engagement as well as an exploration of variation in types of leadership behaviour. Third, since leadership does not take shape in a vacuum, this research considers the context in which leadership behaviour is situated, an approach called for in both public and generic management literature (O'Toole & Meier, 2015; Ospina, 2017; Porter & McLaughlin, 2006). Zooming in on conditions that facilitate or inhibit various members to engage in leadership behaviour in public organizations should provide insights with both theoretical and practical relevance.

The paper proceeds by discussing the concepts and theoretical expectations that inform our hypotheses. Next, we elaborate the study's methodological and analytical choices, followed by the results of the empirical analyses. Finally, we discuss the findings, including limitations and implications for follow-up research and for practice.

4.2 Theoretical framework

Leadership behaviour and the role of formal positions

Leadership both gains importance and becomes more complex as public organizations are increasingly characterized by 'boundaryless' and post-bureaucratic forms of organizing (Groeneveld & Van de Walle, 2011; Shamir, 1999; van der Voet & Steijn, 2021). Reforms spurred by New Public Management (NPM) thinking have to an extent replaced the traditional structures of bureaucratic control with more flexible arrangements, involving the devolution of responsibilities and authority, decompartmentalization, and ad-hoc structures (Diefenbach, 2009). Furthermore, the New Public Governance (NPG) paradigm has shifted thinking and organizing towards an emphasis on the creation of public value through collaborative arrangements (between organizations as well as between various units within organizations) (Crosby & Bryson, 2005; Osborne, 2006). These developments create new interdependencies and demands for collaboration since formal authority is less strictly connected to hierarchical leadership positions and

is instead spread more widely throughout and between organizations (Denis et al., 2001; Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011; Gronn, 2002; Shamir, 1999). As structure loses its dominance in organizational coordination, behaviour can to an extent replace it: leadership can fill the gap and thereby gain importance in successfully achieving organizational goals (Shamir, 1999).

These trends have implications for leadership behaviour within organizations both for formal leaders as well as non-managerial organizational members. In this study, we define leadership as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives" (Yukl, 2008, p. 8). This definition does not limit leadership behaviour to formal leaders, but is open to the possibility that organizational members without formal leadership positions contribute to leadership. Since individual organizational members have to accept their role in this process in order for this alternative mode of coordination to succeed, it is relevant to focus on the individual-level behaviours within the organization that constitute said leadership. We move beyond the typical limitation of the leader-centred approach (Ospina, 2017) that studies formal managers as 'leaders', expanding it to a person-centred approach to study leadership focused on the behaviour of organizational members more generally.

In addition, we conceptualize leadership as encompassing a repertoire of different behaviours (van der Hoek, Groeneveld et al., 2021). This provides a comprehensive perspective on leadership (see calls by Kramer et al. 2019; Pedersen et al. 2019). This is particularly relevant since various behaviours are necessary to deal with the complexity and paradoxes stemming from 'boundaryless' forms of organizing. To study leadership amid such complexity, organization science developed the Competing Values Framework (CVF) (Denison et al., 1995; Quinn & Rohrbaugh, 1981). Underpinning the CVF is the value tension between short- and long-term interests in ensuring an organization's viability over time. This tension also links to the classic value tension between values of democracy and bureaucracy that are key to leadership in public organizations (van der Hoek, Beerkens et al., 2021). Bureaucratic values are reflected in the need for stability and continuity to provide certainty and confidence in organizational performance. In terms of leadership, this stresses the importance of behaviours connected to daily operations. Simultaneously, democratic values of responsiveness are present in the need to adapt and innovate to remain capable of dealing with challenges.

Leadership behaviours with a more strategic and adaptive rationale are therefore essential.

A repertoire conceptualization is particularly beneficial when we want to understand how leadership is enacted by an increasing number of organizational members. For example, certain types of behaviour may be more strongly connected to hierarchical responsibilities and authority than others. This would create differences in how likely they are to be performed by organizational members with and without formal leadership positions. Since little is known about this, in our research we adopt a somewhat exploratory approach to explore possible variation in types of leadership behaviour.

Traditionally, leadership expectations were connected to formal leadership positions. Role theory helps to explain leadership behaviour by connecting it to job positions and role expectations. Among a wide variety of factors, the positional role that a person holds informs behaviour. Integrating insights from a range of social science disciplines, Biddle (1979, p. 58) defines a role as "those behaviors that are characteristic of one or more persons in a context." In this definition, a role is seen from a behaviourist perspective. In contrast, Seeman (1953) sees a role as the expectations regarding the behaviour of a person in a specific position. Here, not the behaviour itself but the expectations connected to positional role behaviour is key. These two views show that implicit expectations (although expectations can be explicit by talking about them or writing them down) regarding a role interact with the discernible behaviour of a person in that particular positional role. As such, formal leadership positions could be thought to convey expectations regarding the enactment of leadership behaviour. Role theory posits that such expectations would lead holders of leadership positions to act in accordance with, and more frequently engage in leadership behaviours.

Given the described trends, the connection between position and behaviour is no longer straightforward, and leadership expectations are now present for a wider range of organizational members (Jakobsen et al., 2021; Kjeldsen, 2019; Kjeldsen & van der Voet, 2021; Tian et al., 2016; Woods et al., 2004). The literature on distributed leadership often assumes that, alongside the spread of expectations of leadership agency among multiple actors, power is also more widely distributed. However, as Lumby (2019) argues, one should recognize that the implementation of distributed leadership is generally still embedded within a power structure. She cites evidence that points more in the direction of 'formal and informal delegation within a bureaucratic system' than of distributed power (p. 11). This suggests that

leadership responsibility and authority still largely reside in formal leadership positions and that opportunities for other members, lacking such positions, to engage in leadership behaviour remain limited. It is reasonable to assume that this does not only apply to the educational sector on which Lumby focused, but is true within public organizations more generally. For instance, research shows that formal authority has implications for leadership behaviour: because their authority grants them more options, leaders with greater formal authority use more types of leadership behaviour to deal with ambiguous situations (van der Hoek, Beerkens et al., 2021). In line with Lumby's (2019) argumentation, we would expect that being in a formal leadership position empowers organizational members to perform leadership behaviour, whereas other organizational members are less likely to engage in leadership behaviours because they lack the authority connected to a formal leadership position.

Hypothesis 1: A formal leadership position has a positive effect on leadership behaviour.

To explain leadership behaviour by a broader set of organizational members, we look at conditions that could reinforce or diminish the influence of positional role expectations on leadership behaviour. First, the organizational structure could impose barriers. Public organizations typically display bureaucratic characteristics that constrain the discretion of managers and employees (Mintzberg, 1979; Rainey, 2014) and may limit the room for manoeuvre to engage in leadership behaviour. Second, environmental complexity may present a greater need for leadership. When interrelatedness and interdependencies are common, more people may have to contribute to leadership as one of their organizational tasks (Jakobsen et al., 2021; Kjeldsen & van der Voet, 2021; Shamir, 1999), stimulating broader engagement in leadership behaviour.

Organizational structure

The organizational structure could limit or enable agency. Following Johns' (2006) view of the role of context in understanding behaviour, factors within the organizational context could constitute a limitation on range by providing opportunities or constraints on undertaking a particular action. One such factor concerns the organizational structure. From organization theory and public management studies, it is known that organizational structure affects behaviour

in organizations, including leadership behaviour (Lawrence & Lorsch, 1967; Rainey, 2014; van der Voet 2014). Typically, and widely discussed, the structure of many public organizations has a bureaucratic character. Referring to Weber's ideal type of bureaucracy, a bureaucratic organizational structure often has strong characteristics of formalization, centralization, and a strict division of authority (Boyne, 2002; Mintzberg, 1979; Rainey, 2014; Stazyk & Goerdel, 2011; Van der Voet 2014). Formalization refers to the extent to which processes and behaviour are laid down in written rules, regulations, and protocols (Pugh et al., 1968; Walker & Brewer, 2008). Centralization concerns the concentration of formal in decision-making power that reflects the organizational hierarchy (Aiken & Hage, 1968). Finally, division of authority and competences through an administrative hierarchy denotes how clear it is to organizational members who is allowed and expected to do particular things (Stazyk & Goerdel, 2011).

Each of these characteristics serves the purpose of limiting the random influence of individual organizational members in order to safeguard values such as equality and lawfulness (Rainey et al., 1995). As such, bureaucratic characteristics present a level of control over what can and what cannot be done, and by whom. Overall, organizational members in organizations in which those characteristics are relatively strong are confronted with more checks on their behaviour and their leeway to act is more restricted by the organizational structure. This also pertains to the leeway for leadership behaviour. Other studies (e.g., van der Voet, 2014) have found that a bureaucratic structure, including centralization, formalization, and red tape, limits organizational members' autonomy and room for initiative and, therefore, hampers the possibility for them to participate in leadership. On this basis, we expect a limiting, negative relationship between bureaucratic structure and leadership behaviour.

Hypothesis 2: A bureaucratic structure has a negative effect on leadership behaviour.

Given the developments regarding devolving authority and increasing collaboration, we might see a decline in bureaucratic structures. In particular, a weakening of hierarchical authority may lead to a partial replacement of structural coordination by behavioural coordination in leadership (Shamir, 1999). This could lead to changes in the opportunities for performing leadership. Since a bureaucratic structure dictates who can and cannot act (Hansen & Villadsen, 2010), it reinforces the effect

of positional role expectations that role theory suggests. Hence, organizational members without a formal leadership position have traditionally had little room for manoeuvre, and would gain the most in terms of additional space to act. The restriction-of-range argument (Johns, 2006) can also be expected to be more relevant for those who are most restricted by the bureaucratic structure. In other words, a bureaucratic structure reinforces the behavioural differences between organizational members with and without formal leadership positions. This leads to the expectation summarized in our third hypothesis.

Hypothesis 3: A bureaucratic structure strengthens the positive relationship between having a formal leadership position and leadership behaviour.

Environmental complexity

Leadership behaviour may also be explained by organizational contextual factors that provide opportunities and create a need to perform leadership behaviour. Connected to increasingly decentralized and collaborative forms of working, it is relevant to examine the role of environmental complexity. Following contingency theorists such as Lawrence and Lorsch (1967), Mintzberg (1979), and Perrow (1970), who studied the structure and operation of organizations in relation to their environment, public management scholars have also taken an interest in the topic (Rainey, 2014). Environmental complexity can be defined as the number of factors in the environment affecting the organization and the degree to which these factors are interrelated (Volberda & van Bruggen, 1997). Characteristics of the public sector, such as a broad spectrum of stakeholders involved in service delivery processes and accountability requirements, typically position public organizations amid environmental complexity (Boyne, 2002; Kjeldsen & van der Voet, 2021; O'Toole & Meier, 2015; Rainey, 2014; van der Voet et al., 2015). Moreover, due to the developments spurring collaborative governance in networks and partnerships between multiple agencies, the environmental complexity is tending to become more pronounced (Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011).

This complexity impacts on the internal organization and may require additional leadership activity to coordinate and facilitate collaboration and organizational performance. Amid environmental complexity, decisions and tasks are affected by a plethora of factors and issues, while numerous internal and external actors are also involved. Since this influences the interrelatedness of activities and people within and across boundaries, and increases their interdependence,

it creates a need for additional coordination. O'Toole and Meier (2015) also argue that environmental complexity requires greater managerial attention since complexity presents challenges for the organization's operations. As a result, the need for leadership behaviour by organizational members grows because such leadership can fulfil the integrative function required for cooperation (Kjeldsen & van der Voet, 2021; Shamir, 1999). Indeed, van der Voet, Kuipers, and Groeneveld (2016) found that environmental complexity stimulates transformational leadership behaviour by supervisory staff. Moreover, van der Voet, Kuipers, and Groeneveld (2015) found that increasing environmental complexity required public managers to use more different types of leadership behaviour to address the various demands of the stakeholders involved. Building on this prior work, we would expect that a higher level of environmental complexity highlights the need for additional leadership behaviour.

Hypothesis 4: Environmental complexity has a positive effect on leadership behaviour.

As this need for leadership becomes more frequent and arises at more places within organizations and collaborations, this coordinating task can no longer be fulfilled by formal leaders alone (Kjeldsen & van der Voet, 2021). This would indicate that organizational members in general, regardless of whether they have a formal leadership position, will become more engaged in leadership behaviour. As such, environmental complexity would reduce the importance of formal leadership positions as sources of role expectations that inform behaviour. The stimulating effect of this characteristic of the organizational context on the enactment of leadership behaviour will be stronger for organizational members without a formal leadership position. Therefore, we expect environmental complexity to have a moderating effect on the positive relationship between formal leadership position and leadership behaviour.

Hypothesis 5: Environmental complexity weakens the positive relationship between having a formal leadership position and leadership behaviour.

Figure 4.1 displays the hypotheses combined in our conceptual model.

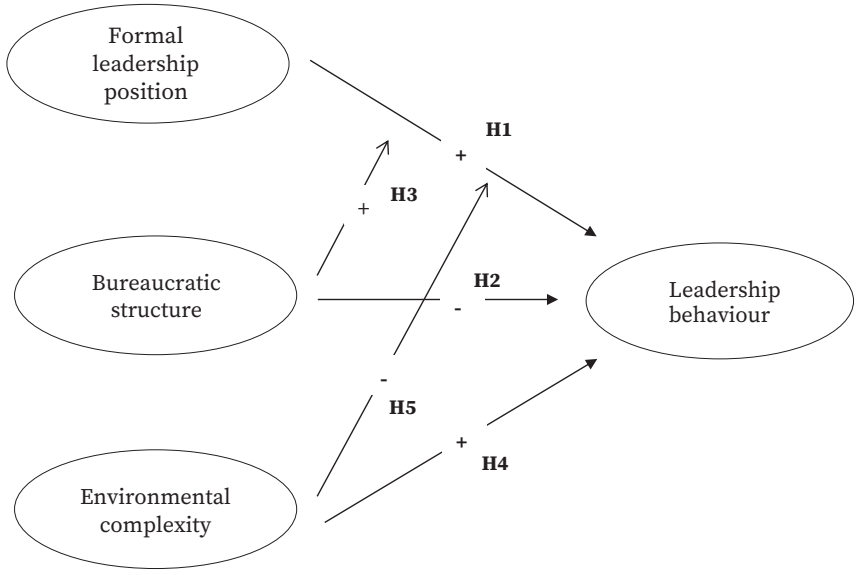

Figure 4.1. Conceptual model

4.3 Research design

Data and sample

We test our hypotheses using survey data obtained from public managers and non-managerial employees in the Netherlands. Data were collected between January and March 2020 through an online questionnaire that was sent to members of Flitspanel, a panel of public managers and employees who have signed up to regularly participate in surveys about management and work in the public sector that is coordinated by InternetSpiegel (part of the Ministry of the Interior). Our respondents worked in four selected subsectors of the Dutch public sector: municipalities, police, universities, and university medical centres (UMCs). These sectors were chosen as they are likely to generate variety in the independent variables used to measure organizational context given the different types of work (policy, implementation, service delivery, highly skilled professional work) and organizational characteristics (such as the role of hierarchy and professionalism). Further, Flitspanel contained sufficient registered respondents with a managerial position to allow comparisons.

Organizational members both with and without formal leadership positions were invited to participate in the study, resulting in complete data for 1,283 respondents (41% response rate). In total, 282 managers occupying a formal leadership position and 1,001 employees without such a formal position completed the survey. We removed respondents from the sample if they were beyond retirement age, claimed to have both a formal leadership position and no experience in formal leadership positions, and/or they had entered impossible values (e.g., 102 years of experience in their current position). This left 1,266 respondents, of whom 276 were managers with formal leadership positions and 990 employees without formal leadership positions, in the sample. Of these, 62.6% were male, the respondents' average age was M=54.7 (SD=7.67) years, and they had on average M=10.3 years of experience in their current position (SD=8.01). Across the total sample, respondents reported an average of M=6.3 (SD=9.08) years of experience in managerial positions. Excluding those without managerial experience (n=501), respondents had a mean 10.5 (SD=9.6) years of experience in managerial positions. The distribution of respondents across the four sectors was as follows: municipalities 43.8%, police 19.0%, universities 22.9%, and university medical centres (UMCs) 14.2%.

Measurement

The questionnaire consisted of previously developed scales and items. Appendix C lists all the items making up the various scales.

Leadership behaviour

To capture the variety of leadership behaviours, leadership behaviour was measured using a 16-item scale previously tested by Denison et al. (1995). All the items were scored on a 7-point scale ranging from 1–*Almost never* to 7–*Almost always*. We adapted the item wording to ask respondents about their own leadership behaviour. By using this scale, we could assess the repertoire of leadership behaviours. The responses to the items measuring the repertoire of leadership behaviours had good scale reliability (Cronbach's $\alpha = 0.92$).

In a somewhat exploratory fashion, we also ran analyses for various subtypes of leadership behaviour. Running these models allowed us to explore whether, and if so how, employees with and without formal leadership position respond differently in terms of various aspects of leadership to characteristics of the organizational context. The complete set of items was split into four subscales of four items, each with a different focus in line with the quadrants of the Competing Values

Framework (Denison et al., 1995; Quinn & Rohrbaugh, 1981). First, leadership behaviours associated with *Open Systems* roles centre on the process of adaptation to the organization's external environment. This involves developing, scanning, and maintaining a network and envisioning, encouraging, and facilitating change. Second, leadership behaviours associated with *Rational Goal* roles emphasize directing and motivating goal-directed efforts of the group. This concerns setting goals, clarifying roles, managing expectations, and stimulating task completion. Thirdly, leadership behaviours with an *Internal Process* orientation focus on internal control and stability. This comprises creating and maintaining structure, coordinating, problem solving, collecting and distributing (performance) information, and overseeing compliance with rules and standards. Finally, *Human Relations* oriented leadership behaviours prioritize human interaction and group processes. This includes encouraging deliberation and discussion, seeking and negotiating consensus or compromise, signalling and attending to individual needs and requests in a fair and active way, and facilitating individuals' development (Denison et al., 1995, pp. 527-528). Each subscale had good or at least sufficient scale reliability (Open Systems leadership behaviour: α=0.84; Rational Goal leadership behaviour: α=0.83; Internal Process leadership behaviour: α=0.74; and Human Relations leadership behaviour: α=0.75).

Formal leadership position

Based on the sampling frame, respondents were invited to participate in the survey either as formal managers or as non-managerial employees. As a check, respondents had to indicate whether it was correct that they did or did not hold a formal leadership position, which was specified as being a supervisor to employees, including conducting performance and development reviews. This measure is a binary variable with 0–*No formal leadership position* and 1–*Formal leadership position*.

Bureaucratic structure

Three items measured the extent to which respondents perceive their organizational context to be bureaucratic. Centralization was measured using the item "Before I can make a final decision, permission of a superior is required." 1–*Permission never required* to 10–*Permission always required* (adapted from Aiken & Hage, 1968; Pandey & Wright, 2006; van der Voet, 2014). Formalization was measured using the item "Written rules and guidelines are important in guiding how I act within my organization." 1–*Not important at all* to 10–*Very important* (Walker & Brewer,

2008). The level of clarity in the structure of responsibilities and authority was measured with the item "Within my organization, competences and responsibilities are clearly distributed." 1–*Not at all clearly distributed* to 10–*Very clearly distributed*. This item was based on a measure used by Stazyk and Goerdel (2011).

A factor analysis revealed that the items did, as expected, refer to distinct concepts and should not be treated as a single scale. Since the items were assessed on an 11-point scale, and there was variation in the scores provided, the earlier decision to use single-item measures for those concepts was considered acceptable. Further, other studies have similarly used single-item measures for similar concepts before (e.g., Kaufmann & Feeney, 2012; Stazyk & Goerdel, 2011; Walker & Brewer, 2008).

Environmental complexity

A 4-item scale was used to measure perceptions of environmental complexity (van der Voet et al., 2016; Volberda & van Bruggen, 1997). The items were scored on a 5-point Likert scale, ranging from 1–*Completely disagree* to 5–*Completely agree*. A Principal Component Analysis showed that all items clearly loaded onto the same dimension (loadings well above 0.6) and that the scale reliability was good with Cronbach's $\alpha = 0.80$.

Control variables

Various individual and organizational characteristics that may affect leadership behaviour were controlled for in the analyses. In terms of individual characteristics, gender (0=*male*, 1=*female*) and age in years were included, as well as experience in the current position, also measured in years. Regarding organizational characteristics, the size of the organizational unit and the sector were included. Size of the organizational unit was measured by asking respondents to indicate the number of employees working for the organizational unit that they themselves (if they have a formal leadership position) or their direct manager (if they do not have a formal leadership position) supervise. The answer category options were: 1=*0-10*; 2=*11-20*; 3=*21-50*; 4=*51-100*; to 5=*More than 100*. Finally, we controlled for sector. In the initial sampling, different sectors were included to generate greater variety in the independent variables. Therefore, in the analyses, we controlled for sector to evaluate the effect of the independent variables. Sector was dummy coded, with the university sector as the reference category.

Analysis

We analysed the data using OLS regression in SPSS (Field, 2013) in two steps: first, the hypotheses were tested, followed by an exploration of variation between subtypes of leadership behaviour. To facilitate interpretation of any moderating effects, all the independent variables were grand mean centred before creating interaction terms (Dalal & Zickar, 2012; Field, 2013).

4.4 Results

Descriptive statistics

Table 4.1 shows the descriptive statistics (means and standard deviations) and bivariate correlations of all variables. Table 4.2 presents independent samples t-tests, showing how formal leaders and non-managerial employees differ in terms of leadership behaviour. These tables show variation in the independent and dependent variables as well as correlations that are largely in line with the theoretical expectations.

Regression analyses: Testing hypotheses

The hypotheses on the relationships between organizational contextual factors and leadership behaviour were tested in a stepwise procedure, starting with a model including only control variables (model 1), then adding formal management position (model 2), bureaucratic structure (model 3), environmental complexity (model 4), and interaction terms (model 5). These models are displayed in Table 4.3.

In model 1, where only control variables were included, only 1.5% of the total variance could be explained ($R^2_{adjusted}$=0.015). Gender had a significant negative relationship with engaging in leadership behaviour, with women showing less leadership behaviour than men (b=-.113, p<.05). This association however disappeared when formal leadership position was added to the model. Having more years of experience in one's current position seems to have a significant negative relationship with leadership behaviour (b=-.012, p<.01). In contrast, the size of the organizational unit had a significant positive relationship (b=.057, p<.05). These relationships persisted when formal leadership position and perceptions of bureaucratic structure characteristics were added to the model, but lost relevance upon the introduction of perceived environmental complexity.

Table 4.1. Descriptive statistics and bivariate correlations (n = 1,266)

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Leadership overall	4.10	.905	-													
2 Leadership OS	3.83	1.137	.83**	-												
3 Leadership RG	4.13	1.141	.90**	.63**	-											
4 Leadership IP	3.97	1.030	.82**	.55**	.75**	-										
5 Leadership HR	4.46	.931	.84**	.61**	.67**	.61**	-									
6 Formal leadership position	.22	.413	.29**	.24**	.30**	.18**	.28**	-								
7 Centralization	6.00	2.556	-.04	-.07*	-.03	-.01	-.02	-.14**	-							
8 Formalization	6.91	2.295	-.01	-.15**	.02	.10**	.02	-.08**	.34**	-						
9 Clarity division authority	6.70	2.221	-.02	-.11**	.02	.05	.00	.04	.15**	.42**	-					
10 Environmental complexity	3.40	.607	.36**	.32**	.32**	.27**	.32**	.12**	.07**	.07*	-.01	-				
11 Gender	.38	n/a	-.06*	-.10**	-.07*	-.04	.01	-.11**	.06*	.11**	.05	-.02	-			
12 Age	54.70	7.672	-.01	-.03	.02	-.02	.00	.01	-.04	.00	.07**	.02	-.15**	-		
13 Years current position	10.28	8.005	-.10**	-.12**	-.10**	-.04	-.07*	-.11**	-.03	.02	.04	-.08**	-.05	.25**	-	
14 Size organizational unit	2.52	1.178	.08**	.07*	.07*	.07*	.07*	.00	.00	.06*	.06*	.14**	-.04	.02	-.03	-
15 Universities	.23	n/a	-.03	.01	-.05	-.03	-.017	.11**	.013	-.17**	-.11**	-.06*	.07*	-.02	-.02	.00
16 UMCs	.14	n/a	-.02	-.06*	-.04	.01	.014	.004	.07*	.04	.01	-.02	.13**	-.05	-.05	.14**
17 Police	.19	n/a	.03	-.04	.05	.02	.07*	.07*	.06*	.13**	.14**	.05	-.17**	.03	.03	-.04
18 Municipalities	.44	n/a	.02	.06*	.03	.017	-.05	-.15**	-.10**	.01	-.03	.03	-.01	.02	.02	-.07*

**p<0.01; *p<0.05

Table 4.2. Independent samples t-test (equal variances not assumed)

Leadership behaviour	Formal leadership position	N	M	SD	t	df	p
Overall	No	990	3.96	.901	-12.175	532.309	.000
	Yes	276	4.60	.729			
Open Systems	No	990	3.68	1.147	-10.063	531.944	.000
	Yes	276	4.35	.928			
Rational Goal	No	990	3.95	1.129	-12.249	516.497	.000
	Yes	276	4.77	.942			
Internal Process	No	990	3.88	1.051	-7.002	519.722	.000
	Yes	276	4.31	.871			
Human Relations	No	990	4.33	.912	-10.788	476.973	.000
	Yes	276	4.95	.829			

The explained variance rose significantly to 9.3% when accounting for formal leadership position ($\Delta R2=.079$, $\Delta F=110.132$, $p<.01$). Model 2 shows that having a formal leadership position ($b=.545$, $p<.05$) is significantly and positively related to engagement in leadership behaviour. This relationship holds for all the subsequent models, not only for the combined measure of leadership in Table 4.3 but also for each type of leadership behaviour. Hypothesis 1 is thus supported by the data.

Considering the organizational contextual factors, we see diverging results. Model 3 includes respondents' perceptions of centralization, formalization, and clarity of authority division. Adding these perceptions does not significantly improve the extent to which leadership behaviour could be explained ($\Delta R2=.002$, $\Delta F=0.731$, n.s.). As such, none of the tested characteristics of bureaucratic structure influence leadership behaviour and hypothesis 2 is therefore not supported by the data. Conversely, perceived environmental complexity significantly adds to the explanation of leadership behaviour ($\Delta R2=.098$, $\Delta F=152.942$, $p<.01$), with 19.1% of the variance explained in model 4. When respondents perceived their organizational environment as more complex, they reported more frequent use of leadership behaviours ($b=.528$, $p<.01$). This finding remains robust when the models are run for the separate types of leadership behaviour. As such, the data provide support for hypothesis 4. Finally, none of the hypothesized interactions show significant relationships with leadership behaviour. This indicates that hypotheses 3 and 5 are not supported. However, there could be differential effects for the individual types of leadership behaviour since the descriptive statistics indicate variance between the various types. We explore this in Table 4.4.

Regression analyses: Exploring subtypes

Table 4.4 displays the results of the full model including all variables and interaction terms while also treating the four subtypes of leadership behaviour as separate dependent variables. Supporting the findings reported in Table 4.3, the interaction between perceived environmental complexity and formal leadership position is not significant for any type of leadership. This means that there is no support for hypothesis 5. While perceived environmental complexity can be said to create opportunities for both formal leaders and non-formal leaders to enact leadership behaviour, this contextual factor does not alter the differences between the groups.

In contrast, Table 4.4 does show diverging findings regarding the moderating effect of perceived bureaucratic structure. The interactions between the three characteristics of bureaucratic structure and formal leadership position are not consistent across leadership behaviour types. Centralization does not affect the relationship between formal leadership position and any of the of the leadership behaviour types, and none of the interaction terms are significant in model 6b when regressed onto Rational Goal leadership behaviour (where the differences between managers and non-managerial employees are generally the most pronounced, see Table 4.2 Nevertheless, there are some indications that perceptions of structural elements do have a moderating effect although the effects are rather small (all below b=0.1) and often only significant at $p<0.10$. The interaction effects can be interpreted from the plots in Figures 4.2, 4.3, and 4.4.

Perceived formalization seems to condition the extent to which respondents with and without formal leadership position engage in Open Systems behaviour (model 6a). The interaction between formalization and formal leadership position is positive, albeit small and only marginally significant: b=0.067, p=0.065. Coupled with the significant main effects of position (b=.528, p=.000) and formalization (b=-.074, p=.000), the model indicates that formal leaders and respondents who perceive less formalization report more use of this type of leadership behaviour, and that the organizational context constrains non-managerial employees more. Figure 4.2 shows that respondents with a formal leadership position report a fairly constant score on Open Systems leadership behaviour, both under conditions of more and of less formalization. Respondents without formal leadership position report a similar level of engagement in that type of leadership behaviour under conditions of low formalization. For them, however, the use of Open Systems leadership behaviour decreases under conditions of greater formalization. This finding supports hypothesis 3. Moreover, in this model, the perceived clarity of

Table 4.3. Regression analyses leadership behaviour (*n* = 1,266)

DV: Total all items (α=0.92)	Model 1	Model 2	Model 3	Model 4	Model 5
	B	B	B	B	B
Constant	4.139	3.919	3.917	3.964	3.970
Gender	-.118*	-.056	-.056	-.058	-.053
Age	.001	.000	.000	-.001	-.001
Years current position	-.012**	-.007*	-.007*	-.005	-.005
Size organizational unit	.057*	.053*	.053*	.024	.024
Dummy UMC	.004	.037	.035	.024	.019
Dummy Police	-.007	.030	.033	.001	-.015
Dummy Municipality	.009	.116†	.116†	.077	.068
Formal leadership position		.633**	.643**	.545**	.558**
Centralization			.001	-.008	-.009
Formalization			.011	.003	-.007
Clear division authority			-.017	-.008	-.014
Environmental complexity				.479**	.475**
INT FLP*Centralization					.008
INT FLP*Formalization					.045
INT FLP*Clear division authority					.037
INT FLP*Environmental complexity					-.005
$R^2_{adjusted}$	0.015	0.093	0.093	0.191	0.193
F	3.685**	17.271**	12.752**	25.851**	19.950**
R^2_{change}		0.079	0.002	0.098	0.005
F_{change}		110.132**	0.731 (n.s.)	152.942**	2.002†

**p<0.01; *p<0.05; †p<0.10
Reference category sector = universities; Variables are grand mean centred (except gender + sector dummies)

division of authority (b=-.035, p=.031), being female (b=-.154, p=.013), having more experience in one's current position (b=-.008, p=.027), and working in the police sector in comparison to working in the university sector (b=-.173, p=.075) have negative relationships with Open Systems leadership behaviour.

Table 4.4. Regression analyses by type of leadership behaviour (n = 1,266)

DV:	Model 6a Open Systems (α=0.84)	Model 6b Rational Goal (α=0.83)	Model 6c Internal Process (α=0.74)	Model 6d Human Relations (α=0.75)
	B	B	B	B
Constant	3.772	3.895	3.932	4.281
Gender	-.154*	-.062	-.077	.081
Age	-.004	.003	-.004	.001
Years current position	-.008*	-.007†	-.001	-.003
Size organizational unit	.040	.012	.027	.016
Dummy UMC	-.084	.041	.038	.080
Dummy Police	-.173†	.103	-.090	.098
Dummy Municipality	.090	.170*	.010	.004
Formal leadership position	.528**	.749**	.414**	.541**
Centralization	.007	-.012	-.024†	-.007
Formalization	-.074**	.004	.033*	.009
Clear division authority	-.035*	-.002	.000	-.021
Environmental complexity	.525**	.532**	.426**	.418**
INT FLP*Centralization	-.044	.018	.045	.012
INT FLP*Formalization	.067†	.042	.074*	-.001
INT FLP*Clear division authority	.041	.018	.032	.057†
INT FLP*Environmental complexity	.065	-.038	-.095	.046
$R^2_{adjusted}$	0.184	0.174	0.107	0.155
F	18.87**	17.64**	10.45**	15.50**

**p<0.01; *p<0.05; †p<0.10
Reference category sector = universities; Variables are grand mean centred (except gender + sector dummies)

Similarly, the level of perceived formalization moderates the effect of having a formal leadership position on respondents' engagement in Internal Process leadership behaviour (model 6c). The interaction between formalization and formal leadership position is significantly positive (b=0.074, p=0.033), and the effects of both position (b=.414, p=.000) and formalization (b=.033, p=.038) are also positive. This not only indicates that both factors separately stimulate the use of this type of leadership

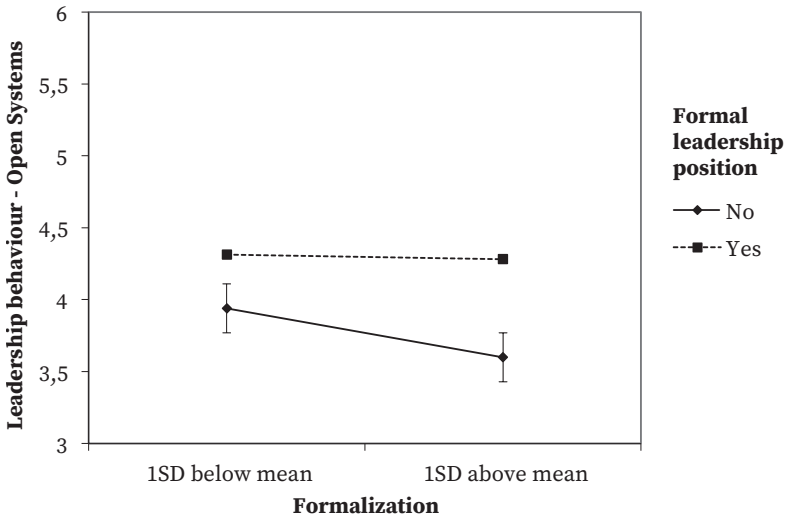

Figure 4.2. Interaction effect of formal leadership position and formalization on Open Systems leadership behaviour

behaviour, but also that it is used more often by both formal leaders and non-managerial employees when a higher level of formalization is perceived, with the increase greater for formal leaders. In line with hypothesis 3, bureaucratic structure here seems to reinforce behavioural differences linked to formal leadership position. Reflecting Figure 4.3, it can be said that respondents with a formal leadership position report greater engagement with leadership behaviour of the Internal Process type when they experience more formalization in their organization. A possible explanation could be that more control and coordination are required at higher levels of formalization, and that this stimulates the enactment of leadership behaviours focused on rules, plans, and protocols. In contrast, respondents without a formal leadership position score slightly lower for this type of behaviour when there is less formalization, and report only slightly more engagement in this type of behaviour when formalization is higher. As such, the difference between formal and non-formal leaders increases with higher levels of formalization.

Another structural aspect affects how formal leaders and organizational members without formal leadership positions act in terms of Human Relations leadership behaviour. In model 6d, a perception of clearly divided competences and responsibilities interacts significantly, but only to a limited extent, with formal leadership position (b=0.057 at p=0.061). At the same time, only the main effect of

formal leadership position (b=.541, p=.000) is significantly related to HR leadership behaviour. This can be interpreted as that formal leaders in general use this type of behaviour more often than those without a leadership position and that this difference is larger when competences and responsibilities are more clearly divided within the organization. Again, this is in line with hypothesis 3. Figure 4.4 shows that respondents with a formal leadership position report enacting more leadership behaviour of the Human Relations type as clarity of the division of responsibility and authority within the organization increases. This could be understood as a way for formal leaders to involve employees more when the latter have formally less authority and hence voice. This leadership behaviour could then be used to counterbalance the formal structure and enable employees to still participate in decision-making. Respondents without formal leadership positions report similar levels of this type of leadership behaviour when responsibility and authority are not clearly divided within the organization. With increasing clarity about this division, their score for this type of leadership behaviour slightly falls, which reinforces the difference compared to respondents with formal leadership positions.

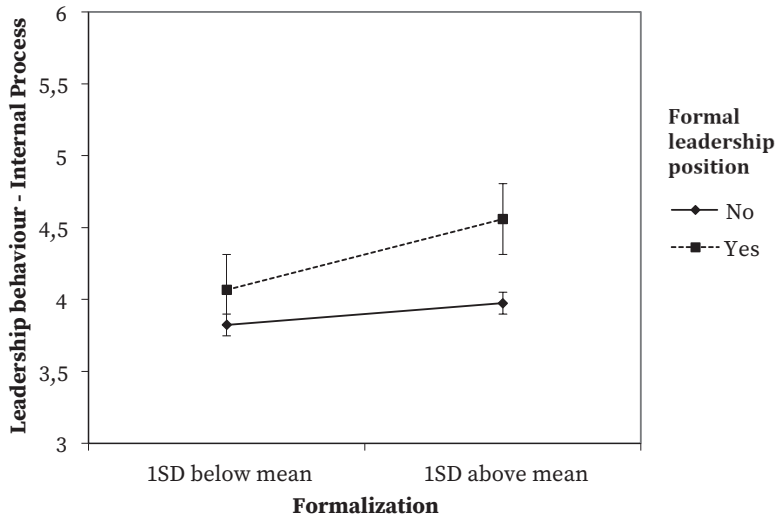

Figure 4.3. Interaction effect of formal leadership position and formalization on Internal Process leadership behaviour

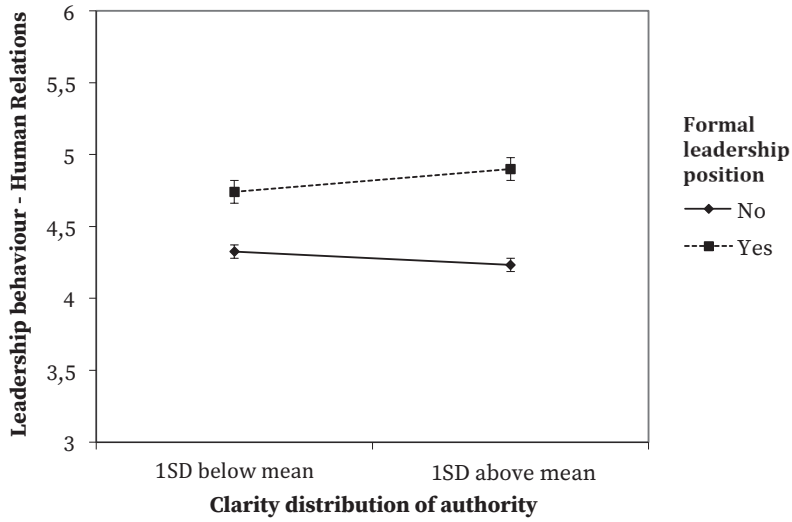

Figure 4.4. Interaction effect of formal leadership position and clarity of division of competences and responsibilities on Human Relations leadership behaviour

4.5 Discussion

New conceptualizations of leadership as a collective process are gaining ground amid ongoing developments of 'boundaryless' and collaborative organizing within the public sector. Not only are hierarchical managers with formal leadership positions considered to exercise leadership behaviour, increasingly also non-managerial employees are becoming involved and even expected to participate in organizational leadership. Consequently, understanding the conditions under which people are more likely to engage in leadership behaviour is gaining importance. Although public management scholars continue to generate valuable insights on person-centred leadership, their attention has largely concentrated on formal leaders. Broadening this perspective can advance our understanding of leadership behaviour on the individual level within organizations. By taking this step, our study reveals that both managers and non-managerial employees report engaging in leadership behaviours, although the extent of their leadership behaviours depends on organizational conditions. As an initial contribution, this demonstrates the relevance of a more inclusive approach to person-centred leadership research.

Our data show that formal leaders are still more active in terms of leadership behaviour than non-managerial employees. This is in line with traditional bureaucratic patterns that explicitly connect leadership to hierarchical management

positions. This finding complements earlier findings by van der Hoek, Beerkens et al. (2021) that formal authority has an enabling effect on leadership behaviour. While their study indicated that formal authority provides opportunities to draw on a wider variety of leadership behaviours, the current study adds that formal leaders are more active in performing leadership than non-managerial employees and that they more often use each type of leadership behaviour. Nevertheless, one should not ignore non-managerial employees as they also participate in each type of leadership, albeit to a lesser extent. Further, both groups exercise more leadership behaviour when the organization's environment is experienced as more complex. However, formal leaders and organizational members without formal leadership positions seem to respond differently to bureaucratic structure. The findings point to a relatively low participation by non-managerial employees in Open Systems and Internal Process leadership behaviours when written rules and regulations are more emphasized within the organization. Likewise, the different levels of engagement in Human Relations leadership behaviour are reinforced, and performed more often by formal leaders, when the administrative hierarchy, with a clear division of responsibilities and competences, is stronger. By adopting a repertoire perspective on leadership behaviour, this study provides a means to further investigate differences between managers and non-managerial employees regarding leadership.

As a second contribution, our study provides insights that help understand organizational leadership from a person-centred perspective against the backdrop of changes that require collective engagement in this task. On the one hand, the finding that both managers and non-managerial employees actively employ leadership behaviours indicates that there are opportunities for collective forms of leadership that could be further developed. On the other hand, the findings indicate that having a formal leadership position still matters and should not be thought of as irrelevant for an individual's leadership behaviour. As Lumby (2019) argued, the leadership behaviour of organizational members is still located within bureaucratic systems that push leadership by some (managers) while restraining the leadership of others (non-managerial employees). A formal leadership position may well be more salient in the expected or permitted exercise of certain types of leadership, especially in organizations that are bureaucratic. This seems to be particularly the case for behaviour types connected to setting direction, following-up on rules and procedures, and developing innovations and people. While there may be opportunities for leadership as a collective process, organizations should be realistic about what can be expected of leadership as a distributed phenomenon

given the apparent barriers to participation by organizational members without formal leadership positions. Leadership development in both theory and in practice could benefit from research that delves into mechanisms that connect opportunities, motivations, and barriers to the usage of various options from the leadership behaviour repertoire.

Moreover, one should consider how non-managerial employees can be moved to enact leadership behaviour. Drawing on role theory, actively communicating expectations regarding leadership behaviour to those who are not in formal leadership positions could be part of this. How organizations deal with such role expectations and responsibilities on the one hand, and formal authority and competences on the other, could also make a difference. That is, to what extent can balance be achieved through formal agreements, or would a relational approach requiring ongoing discussion and coordination between partners be more effective? Further research could investigate the relationships between role expectations, formal authority, and the engagement in leadership behaviour by both managers and non-managerial employees alike.

Further, how leadership as a collective process relates to hierarchical leadership merits greater attention from public management researchers. Kjeldsen and van der Voet (2021) discuss that formal and distributed forms of leadership could be better understood as complementary rather than as excluding each other. Referring to findings of van der Voet, Groeneveld, and Kuipers (2014) and of Günzel-Jensen, Jain, and Kjeldsen (2018), they argue that certain forms of formal leadership may be necessary to create the conditions for effective distributed leadership. Since non-managerial employees seem to face more constraints in engaging in leadership behaviour, a continuing role for certain forms of formal leadership should be expected. Our findings underline the importance of continued research on this combination. Moreover, gaining insight into the distribution patterns of leadership activity, which organizational members are playing which roles, and how formal competences are matched to that distribution will provide a step forward (see also Fitzgerald et al. 2013). As Gronn (2002) and, more recently, Kjeldsen and van der Voet (2021) discuss, a carefully designed distribution might contribute to organizational effectiveness. Learning more about how leadership is distributed among a broader set of organizational members in public organizations would then have theoretical as well as practical value.

As a third contribution, this study shows the importance of the organizational context in understanding broader participation in leadership. Seen in the light of

the trends towards expanding collaborative constellations in public management, that add challenges to decision-making and goal achievement, it is important to recognize that there is a positive link between environmental complexity and exercising leadership behaviour. This connection could be understood as an increased need for coordination, which leadership behaviour can fill (Shamir, 1999). The stimulating effect of environmental complexity highlights the fact that the environment imposes a need for broader participation in leadership in public organizations. Since our findings show that structures can complicate this, public organizations may need to be reshaped, or their structure at least form part of deliberate considerations about leadership expectations throughout the organization, to facilitate contributions by a broad range of its members. Although this research has focused on how perceptions of context matter for various leadership behaviours, future research should, conversely, also consider the role of leadership behaviours in shaping bureaucratic structures and the interactive dynamics in this process (e.g., Wallace & Tomlinson, 2010). Attention to the complex and dynamic role of leadership in public organizations is all the more important because not only is the environmental complexity external to the organization creating a demand for broad leadership engagement; also the complexity in terms of interdependencies within the organization, such as across the boundaries of teams, departments, and functional groups, contributes to it. The devolution of responsibilities and authority, and decompartmentalization ambitions (Diefenbach, 2009; Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011; Shamir, 1999) create a more complex chain of authority which is likely to affect how leadership is exercised. Complementary competences require more collaborative approaches to leadership. Future research could specifically focus on how this internal complexity relates to how leadership behaviour is used.

Limitations

This study has focused on the leadership behaviour of organizational members both with and without a formal leadership position. There are some limitations that should not be ignored when drawing conclusions. First, we could not control for respondents' position in the organizational hierarchy, which could be thought of as differentiating the roles of managers and employees (Walker & Brewer, 2008) and hence as influencing leadership behaviour. Similarly, distinguishing between organizations within the same sector was not possible. Due to privacy protection regulations, we could also not collect nested data and establish clear connections

between formal managers and subordinates. As such, we could not check for self-other rating discrepancies (Vogel & Kroll, 2019). Similarly, common method bias cannot be ruled out because respondents provided the information for all the used variables except for formal leadership position. The data for both the dependent and independent variables stem from the same source, but only the dependent variables were self-evaluations. Although the measures of structure and environment do involve the respondent's perceptions, they are not self-assessments and are thus unlikely to be prone to a social desirability bias in order to look good (Jakobsen & Jensen, 2015). Self-reported accounts of leadership behaviour do carry a risk of desirability and self-serving bias, which is less likely when others evaluate leadership by the focal person (Vogel & Kroll, 2019). However, the intentions behind a leadership behaviour are not factored into third-party reporting, and this is relevant information when trying to explain why leadership behaviour is used in a certain way. Since others have to pick up on leadership behaviour in order to be influenced by it, others' ratings of leadership behaviour have clear benefits to explain outcomes (Jacobsen & Andersen, 2015). However, explaining why organizational members use leadership behaviour the way they do is well served by self-ratings. Since self-reported data enabled us to gain such insights, we accepted the drawbacks of self-reported data.

Furthermore, due to the lack of a nested data structure, patterns of participation in leadership as a collective process could not be investigated. We also did not explicitly ask respondents whether there were expectations of distributed leadership in their organization. This restricts the scope of the data to each individual's behaviour, enabling only a person-centred analysis, and therefore preventing conclusions being drawn about the realities of distributed leadership at a collective level. Although the current findings can feed into the discussion about leadership by a broader set of organizational members, follow-up research is needed that explicitly makes design choices and includes measures to better understand the collective process. Integrating insights from person-centred leadership research and system-centred leadership research would help better understand leadership in complex environments (Ospina, 2017).

In terms of operationalizing leadership behaviour, there were limitations in the scope of the leadership behaviours included. Although the measurement scale is relatively comprehensive regarding leadership behaviour within an organization, we have not considered behaviours that are more collaborative and boundary-crossing in nature. This is a limitation since the developments in terms

of organizing increasingly require interorganizational behaviour. Incorporating such behaviours would enable follow-up research to gain a fuller understanding of leadership at the individual level of analysis in complex forms of organizing. Furthermore, while some authors have argued that public leadership is distinct (Getha-Taylor et al., 2011; Hartley, 2018), others have promoted studying more generic models but explicitly placing them in a public sector context to generate relevant insights (Ospina, 2017; Vandenabeele et al., 2014). This study has sought to advance theorizing by adopting the latter approach and focusing on several characteristics of the organizational context that are typical of public organizations. However, including other leadership behaviours that are more specifically aimed at public values could enrich future studies.

Finally, the Flitspanel sample used is self-selected rather than random. This reduces the generalizability. However, members of this panel are generally interested in management and organization themes. Hence, the participants could be more in favour of leadership activities than other members of the relevant population who are not part of the sampling frame. Nevertheless, we were able to discern a clear distinction between formal leaders and non-managerial employees, with the former exercising more leadership behaviour. If the predicted bias does exist, then this finding is a clear indication that formal position does influence the behaviour of the population. Follow-up research using other types of samples (countries, sectors, sampling strategy, data structure) could add further insight into the external validity of this study's findings.

4.6 Conclusion

So, who are leading? Amid developments that change the importance of leadership throughout public organizations, this study found that managers as formal leaders are still the most active in terms of exercising leadership behaviour. Nevertheless, this study shows that organizational members without formal leadership positions also engage in leadership and that environmental complexity creates opportunities for broader participation in leadership. Attention is therefore warranted on bureaucratic structural characteristics that may constrain non-managerial employees. These findings advance our understanding of conditions that enable organizational leadership as a collective endeavour, by managers and non-managerial employees alike. Many questions remain, and further research on these themes is encouraged to advance both theory and practice.

Chapter 5

Joining in with leadership? A survey of leadership behaviour and identity of non-managerial employees in public organizations

Abstract

Awareness that not only managers, but also non-managerial employees are valuable sources of leadership in public organizations is growing. As leadership behaviour of non-managerial employees is still rarely studied, understanding why they show leadership behaviour has theoretical and practical value. Based on identity theory, seeing yourself as a leader may be a piece of the puzzle of behaving like a leader. This study zooms in on leadership behaviour of non-managerial employees and assesses whether leadership identity and previous experience in formal leadership positions affect their engagement in leadership. Survey data collected among public servants (n = 976) in The Netherlands show that a more central leadership identity also stimulates leadership behaviour in this group of organizational members, which can partially be explained by their past experience. The results demonstrate the utility of role and identity theories in explaining leadership behaviour and have implications for research and leadership development.

van der Hoek, M. (Under review). Joining in with leadership? A survey of leadership behaviour and identity of non-managerial employees in public organizations. *Decision to revise and resubmit to an international peer-reviewed journal.*

5.1 Introduction

Developments in organizational leadership are pronounced, whereby a shift from hierarchical to distributed and collective forms of leadership can be observed (Day & Harrison, 2007; DeRue & Ashford, 2010; Gronn, 2002; Jakobsen et al., 2021; Ospina, 2017). Increasingly, more flexible and hybrid forms of organizing enter traditionally bureaucratic organizations, blurring the typical connection between formal management positions in the hierarchy and responsibilities and expectations of leadership (Denis et al., 2001; Getha-Taylor et al., 2011; Groeneveld & Van de Walle, 2011; Shamir, 1999; van der Voet & Steijn, 2021). In response to these developments, organizations recognize the need for a broader participation in leadership, meaning that leadership must become enacted as a distributed phenomenon. Not only formal leaders, but also other organizational members are involved and expected to participate in organizational leadership (Spillane, 2006; Tian et al., 2016; Woods et al., 2004). Engagement of non-managerial employees in leadership can be seen as an organizational resource (Tian et al., 2016), because it taps the diversity of perspectives and expertise of organizational members (Woods et al., 2004; Lumby, 2019). Against this background, it is important to develop leadership capacity in organizations in a broader sense than formed by managers only (Day & Harrison, 2007).

Typically, non-managerial employees are not thought of as 'leaders', since bureaucratic structures grant leadership responsibilities and expectations to formal managers in the hierarchy (DeRue & Ashford, 2010; Hansen & Villadsen, 2010; Mintzberg, 1979). This resonates in the literature: studies on leadership behaviour by non-managerial organizational members are scarce, as research usually conceptualizes leadership as supervising subordinates (Van der Hoek, Groeneveld et al., 2021) and has a strong theoretical and empirical focus on formal managers (Ospina, 2017; Vogel & Masal, 2015). Now that this former group becomes more important for leadership in organizations, however, understanding why they engage is relevant. Prior research points out that thinking of yourself as leader contributes to exercising leadership behaviour (e.g., Day & Harrison, 2007; Day et al., 2009; Miscenko et al., 2017), indicating the concept of leadership identity is useful for this question. Identifying with a leadership role may be even more important in the absence of common expectations linked to a position as is the case for managers; possibly more barriers need to be overcome to show leadership behaviour when it is not explicitly part of your job (DeRue & Ashford, 2010; Turner,

2002). Therefore, how non-managerial employees think of themselves is important to understand their leadership engagement.

How such leadership identity is shaped can be understood from someone's experiences. Besides experience gained through leadership training (e.g., Grøn et al., 2020), the literature shows that experience from learning on the job can contribute to one's self-image as a leader (Day et al., 2009; Miscenko et al., 2017). Working in managerial positions has much potential in this regard given commonly held job expectations involving leadership (DeRue & Ashford, 2010). Variation in prior working experience exists among non-managerial employees, since career paths do not only involve linear, upward moves along the hierarchy towards more managerial responsibility, which is particularly relevant when organizations become more flexible and hybrid.

This study addresses these issues by zooming in on the leadership behaviour of individual organizational members who are not formal managers and as such have no responsibility and authority over personnel. This is guided by the research question: *To what extent can leadership behaviour by non-managerial employees in public organizations be explained by leadership identity and formal leadership experience?* This research then aims to gain insight in leadership by non-managerial employees.

Several contributions to the literature on leadership and public management follow. Firstly, this study introduces a focus on leadership by non-managerial organizational members – a group that has largely been neglected in leadership research. Recently, more scholars call for adopting a more collective conception of leadership in public management (Kjeldsen, 2019; Jakobsen et al., 2021; Ospina, 2017). This study aims to connect to this developing scholarship by studying leadership behaviour of a group of increasingly important organizational members on the individual level. As some types of behaviour may be typically associated with formal authority and managerial positions, a repertoire conceptualization of leadership behaviour (Van der Hoek, Groeneveld et al., 2021) is adopted. Including such variety could help to avoid missing relevant differences in behaviour because non-managerial employees generally lack formal authority from their position. Secondly, the concept of leadership identity in relation to leadership behaviour has received limited empirical research attention in the generic and public management and leadership literature (Grøn et al., 2020; Kwok et al., 2018; Lord et al., 2020). More specifically, application to non-managerial public sector employees, in light of distributed leadership expectations, has not been investigated yet. Drawing on identity theory, this study advances theorizing on leadership behaviour

and identity. Addressing these theoretical questions can provide stepping stones for leadership development in practice.

The article continues with the theoretical framework, elaborating the central concepts and hypotheses. Then, the research design and methods are outlined and the analyses are presented. The final paragraph discusses the results and theoretical and practical implications.

5.2 Theoretical framework

Leadership behaviour and identity

Leadership is not reserved for formal leaders in hierarchical management positions only; increasingly, non-managerial employees throughout organizations are playing a role in organizational leadership (Gronn, 2002; Jakobsen et al., 2021; Tian et al., 2016; Woods et al., 2004). Since non-managerial employees often lack formal authority and roles, it is informative to focus on the leadership behaviour they engage in. Yukl's (2008) definition of leadership as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives" (p. 8), is open to broader participation in leadership. While collective and distributed notions of leadership become more common (Gronn, 2002; Jakobsen et al., 2021; Ospina, 2017), academic research on leadership behaviour by this latter group is rare. Possibly one of the reasons why such research lags behind is the association of leadership with positions in the hierarchy (DeRue & Ashford, 2010; Hansen & Villadsen, 2010). Like many observers, non-managerial employees may not see themselves as leaders, because of this prototypical idea of leaders. Yet, one's self-image affects one's behaviour. The literature on leader and leadership development shows that the notion of a leadership identity can help to explain leadership behaviour (Ibarra et al., 2014).

Following Grøn et al. (2020), leadership identity is defined as "the extent to which an individual views himself or herself as a leader" (p. 1698). Like leadership behaviour, it is not the sole terrain of formal managers (Day et al., 2009; DeRue & Ashford, 2010). DeRue and Ashford (2010) discuss that leadership identity is not exclusively for formal hierarchical managers. They reckon that management positions are generally associated with leadership (Mintzberg, 1979), although these are not necessarily connected (both directions). Indeed, the authors argue

that managers and non-managerial employees can have leadership identities (as well as follower identities). They argue this is increasingly relevant as shared and distributed conceptions of leadership in organizations gain currency, which acknowledge that also non-managerial employees can enact leadership, and have leadership identities.

In line with Kwok et al. (2018) and Miscenko et al. (2017), this definition of leadership identity is connected to a particular role rather than a social category. Drawing on role theory, a role can be understood as the expectations regarding the behaviour of a person in a specific position, forming a mental image of what this role entails (Seeman, 1953). Similarly, identity theory poses that a role identity "reflects an internalized set of role expectations" (Farmer et al., 2003, p. 620; Stryker & Burke, 2000) that guides an individual in "what to do, what to value, and how to behave" (Kwok et al., 2018, p. 649). Since individuals can have various roles in their working lives, they can have multiple sub-identities (Day & Harrison, 2007), of which a leadership identity can be one. Among the set of sub-identities, variation in strength and centrality is possible. The stronger an identity is, the more someone defines herself with it (Miscenko et al., 2017), and the more central an identity is, the more important this identity is for one's self-definition (Grøn et al., 2020). Considering the centrality of leadership identity helps to understand leadership behaviour, since central identities are more easily available to activate internalized role expectations and hence for cuing behaviour (Kwok et al., 2018). Additionally, more central identities have a stronger influence on behaviour, because centrality enhances consistency between role expectations and role behaviour (Grøn et al., 2020; Kwok et al., 2018).

Centrality involves contrasting two or more sub-identities. To understand the relationship between leadership behaviour and identity for non-managerial employees, the centrality of leadership identity in relation to substantive occupational identity merits attention. Analogous to a leadership identity, a substantive occupational identity is thought to provide an individual with role expectations in terms of values, beliefs, and behaviours connected to a specific career track (Leavitt et al., 2012). Such occupational identities result from being socialized in a culture of strong professional norms (Leavitt et al., 2012; McGivern et al., 2015; Pratt et al., 2006). When non-managerial employees work in substantive occupational roles, it is likely that they identify with their professional group and accept the behavioural expectations flowing from the professional norms. As Grøn et al. (2020) argue, this occupational identity is particularly relevant for employees

in public organizations, where many types of work are done by professionals and developing a leadership identity is even challenging for formal managers arising from such strong professions that provide strong occupational identities. This may be even more pronounced for organizational members without managerial position, for whom the substantive occupation may be the primary work role that offers a source for identity.

Combining these insights, a relationship between an individual's leadership identity and leadership behaviour can be expected. When you identify with a role of leader, identity theory posits that you have internalized expectations about appropriate behaviour matching that role (Day et al., 2009; Farmer et al., 2003; Lord & Hall, 2005; Stryker & Burke, 2000). In line with role theory, behavioural expectations inform the exposed behaviour (Biddle, 1979). This means that if you identify as a leader, you have accepted and internalized the expectation that you will act as a leader and therefore are also likely to show leadership behaviours. Indeed, various studies show that seeing yourself as a leader motivates engagement in leadership behaviour (Day & Harrison, 2007; DeRue & Ashford, 2010) as it guides how you act and interact in roles of leadership (Day et al., 2009; Johnson et al., 2012; Kwok et al., 2018; Miscenko et al., 2017). When this identity is stronger or more central, the acceptance of behavioural expectations is stronger, and role behaviours are more easily activated. Consequently, it is more likely that you will follow up on these expectations by enacting leadership behaviour. In a public sector context, Grøn et al. (2020) also found support for this relationship. Since non-managerial employees can also develop a leadership identity, it can be expected that this relationship holds for this group.

Hypothesis 1: Organizational members with a more central leadership identity perform more leadership behaviour.

Leadership identity and experience

How, then, does a leadership identity develop and become more central? Prior research points out that identity develops, amongst others, because of external stimuli (Miscenko et al., 2017) and empirical findings support that managers' centrality of the leadership identity is enhanced by prior experiences (Day et al., 2009). Also in a public sector setting, Grøn et al. (2020) found a positive relationship between tenure and leadership identity, indicating that managers with more formal management experience have a more central leadership identity compared to less

experienced managers. Two mechanisms that usually underlie such leadership identity development can be derived from identity theory: becoming acquainted with and internalizing the behavioural expectations connected to the leadership role and practicing and acting out the expected behaviours (Stryker & Burke, 2000). As a result, a connection between the leadership identity and the self is made and the individual sees herself as leader: a self-in-role schema is developed (Collier & Callero, 2005). A type of experience that can trigger these processes is working in managerial positions. A change of work position and role, for instance when transitioning into managerial positions, spurs development of the identity to also include more leadership identity (Day & Harrison, 2007; Day et al., 2009; Miscenko et al., 2017). This type of experience is particularly relevant to understand the development of leadership identity, as DeRue and Ashford (2010) note: "it is likely that a person's leader identity will be enhanced by being placed in a formal supervisory role, even though the two are not synonymous." (p. 640).

Why managerial experience contributes to leadership identity can be explained by the formal role expectations that connote a managerial position as well as opportunities to practise leadership behaviour. Typically, task descriptions of managerial positions contain explicit references to being in a leadership role. DeRue and Ashford (2010) refer to institutionalized expectations of leadership provided by formal supervisory positions. Formal leadership positions provide cues that can reinforce leadership identities, both for leaders themselves and for followers: "occupying a supervisory role represents a powerful institutional grant of a leader identity conveyed through a formal social structure that all group members recognize and operate within." (DeRue & Ashford, 2010, p. 640). The behavioural expectations that accompany a leadership role are then explicated and are more likely integrated into one's self-image and leadership identity (Day & Harrison, 2007). Moreover, working in a managerial position creates opportunities to practise leadership behaviour and enacting the leadership identity. This reinforces one's self-image as a leader (Collier & Callero, 2005; Stryker & Burke, 2000).

Whether this translates to non-managerial employees has not been studied, yet a case can be made that experience that stimulated leadership identity in past positions of formal leadership continues to influence this group's leadership identity when no longer in a management position. While non-managerial employees are likely to have a balance occupational–leadership identity that is tilted towards the former, management experience may have shifted it towards the latter. Although identity is subject to development and can change over time, it can be understood

more like incremental than radical change (Ibarra et al., 2014). It can then be thought that by transitioning from a managerial into a non-managerial position, the substantive occupational identity gains in importance. At the same time, the leadership identity may become less important, for instance because others around you expect you less to perform a leadership role (Stryker & Burke, 2000), but the leadership identity remains part of the self-image. The leadership identity built up during past managerial experience may be less important for the new position, but can still be activated and guide behaviour. Longer experience in managerial positions could have made the leadership identity more central, resulting in a stronger and more durable connection between the leadership identity and the self (Ibarra et al., 2014; Stryker & Burke, 2000). It can then be expected that having more experience in management positions makes it more likely that a leadership identity has been integrated in the self-image and hence that someone has a leadership identity that is more central compared to someone with less managerial experience.

Hypothesis 2: Organizational members with longer formal leadership experience in management positions have a more central leadership identity.

Leadership identity connecting behaviour and experience

Based on identity theory this study argues for a path from prior experience through identity development to engaging in leadership behaviour. Several studies have supported this argumentation by showing that past behaviour enhances role identity and subsequently future behaviour. In sociology, Penner (2002) discusses research that supports this relationship for volunteering behaviour and volunteer identity (Grube & Piliavin, 2000; Piliavin et al., 2002). Both the influence of prior volunteering behaviour on volunteer identity and the influence of volunteer identity on sustained volunteering behaviour have been supported. Moreover, the full path has been tested by Callero (1985) in a study of the salience of a blood donor role-identity in relation to blood donations. Callero (1985) shows that past blood donation is associated with higher salience of the identity, which in turn is associated with a continuation of more role-congruent behaviour.

These arguments could be translated to leadership behaviour and identity. Though not tested directly, Day and Harrison (2007) write about novice leaders having a narrower leadership identity and accordingly a narrower leadership behaviour repertoire, as they seem to "encounter most situations in the same way" (p. 366). This reflects that prior experience with leadership behaviour affects

the leadership identity and subsequently follow-up leadership behaviour. When someone has gained less experience, the leadership identity has developed less. In turn, this limits the impact on future behaviour. On the other hand, more experienced leaders are found to have a more developed leadership identity that is stronger and more central (Grøn et al., 2020; Lord & Hall, 2005), which is associated with more engagement in leadership. As DeRue and Ashford (2010) theorize, showing leadership behaviour bolsters the leadership identity, which stimulates continued leadership activity.

If leadership behaviour can be explained by the centrality of one's leadership identity, and centrality of leadership identity can be explained by one's past managerial experience, it could be argued that past experience leads to leadership behaviour as a consequence of developing a more central leadership identity. This leads to the last hypothesis.

Hypothesis 3: Organizational members with longer formal leadership experience in management positions perform more leadership behaviour due to the development of a more central leadership identity.

The hypotheses are visualized in the conceptual model (Figure 5.1)

Figure 5.1. Conceptual model

5.3 Research design

Data and sample

The hypotheses are tested on survey data, which were collected as part of a survey among civil servants in the Netherlands (see also Chapter 4). An online questionnaire was distributed among members of Flitspanel: managers and employees in the Dutch public sector who have signed up voluntarily to participate in research about management and work in the public sector. InternetSpiegel

(part of the Ministry of the Interior) coordinates Flitspanel and has carried out the logistics of sampling and questionnaire administration. Data collection ran from January through March 2020; one reminder was sent two weeks after the first invite.

The sample used in this study consists of non-managerial employees without formal leadership positions, which was specified as supervising employees and includes conducting performance and development reviews. Respondents work in organizations in four subsectors of the Dutch public sector: municipalities, police, universities, and university medical centres (UMCs). This selection was made to sample respondents with different types of work (policy, implementation, service delivery, high-skilled professional work) employed in organizations with varying characteristics (e.g., the role of hierarchy and professionalism), with the intention to sample variation on the explanatory variables. In total, 1,001 respondents filled out the survey (23% response rate). Respondents were excluded if they were older than the retirement age and/or they had entered impossible values (e.g., 102 years of experience in their current position). This resulted in complete data of 990 respondents. Upon inspection of outliers, 14 respondents were deleted, resulting in a total of 976 respondents.

60% of respondents were male, respondents had an average age of M=54.7 (SD=7.72) years and had on average M=10.8 years of experience in their current position (SD=8.22). In the total sample, respondents reported M=3.4 (SD=6.46) years of experience in managerial positions, ranging from 0 to 40 years. Leaving out those without managerial experience, respondents (n = 366) had a mean of 9.2 (SD=7.69) years of experience in managerial positions. The distribution of respondents per sector is as follows: municipalities 47.4%, the police 17.6%, universities 20.7%, and university medical centres (UMCs) 14.2%.

Measurement

To measure the central concepts, previously developed scales and measures were used in the questionnaire. An overview of all items can be found in Appendix D.

Leadership behaviour

The dependent variable, leadership behaviour, was measured with a 16-item scale developed by Denison and colleagues (1995). This scale covers a variety of leadership behaviours, matching a repertoire conceptualization of leadership behaviour (van der Hoek, Groeneveld et al., 2021). All items were scored on a 7-point

scale ranging from 1–*Almost never* to 7–*Almost always*. Item wording was adapted to ask respondents about their own leadership behaviour.

Four types of leadership behaviours, related to the quadrants of the Competing Values Framework (CVF; Denison et al., 1995; Quinn & Rohrbaugh, 1981), were distinguished in the analyses and were measured by four items each. *Open Systems leadership behaviours* concern the process of adaptation to the organization's external environment. This includes developing, scanning, and maintaining a network and envisioning, encouraging, and facilitating change. *Rational Goal leadership behaviours* focus on directing and motivating goal-directed efforts of the group. This involves setting goals, clarifying roles, managing expectations, and stimulating task completion. *Internal Process leadership behaviours* emphasize internal control and stability. This entails creating and maintaining structure, coordinating, problem solving, collecting and distributing (performance) information, and overseeing compliance with rules and standards. *Human Relations leadership behaviours* prioritize human interaction and group processes. This involves encouraging deliberation and discussion, seeking and negotiating consensus or compromise, signalling and attending to individual needs and requests in a fair and active way, and facilitating individuals' development (Denison et al., 1995, pp. 527-528).

Centrality of leadership identity

Following the procedure of Grøn et al. (2020), centrality of leadership identity was measured with an item contrasting the importance of the respondent's substantive occupational identity and leadership identity: "The question below concerns the role that you identify with most in your work. We distinguish between a substantive occupational identity (such as police officer, doctor, researcher, policy advisor) and a leadership identity. Could you indicate which identity is most important to you in your work?" Answers were measured on an 11-point scale, ranging from 0–*Complete identification with occupational identity* to 5–*Both are equally important* to 10–*Complete identification with leadership identity*.

Formal leadership experience

Respondents were asked: "How many years of experience in management positions have you gained during their working life?" Respondents who answered *Not applicable, no such experience*, were recoded into a score of 0 years.

Control variables

The analyses control for several individual and organizational characteristics that could influence the variables of interest and their relationships. Relevant individual characteristics are gender (0=*male*, 1=*female*), age in years, and educational level (0=*other*, 1=*lower vocational training*, 2=*lower secondary education*, 3=*higher secondary education*, 4=*intermediate vocational training*, 5=*higher vocational training*, 6=*some university education*, 7=*university education*, 8=*doctoral degree*). Moreover, experience in the current position measured in years is important, since it may affect identity centrality as well as the potential influence of prior managerial experience on identity centrality. Two organizational characteristics were included as control variables. Size of the organizational unit was measured by asking respondents to indicate the number of employees working for the organizational unit that their direct manager supervises. Answer categories range from 1=*0-10*; 2=*11-20*; 3=*21-50*; 4=*51-100*; to 5=*More than 100*. Lastly, sector serves as control variable, based on the sampling frame (municipalities, police, universities, and UMCs). Sector was dummy coded, with the university sector as reference category.

Analytical strategy

To test the hypotheses, structural equation modelling (SEM) was performed using STATA 15. As a first step, the measurement model for the dependent variables was assessed in a confirmatory factor analysis (CFA). Following Kline's (2011) recommendation, various complementary criteria were used to evaluate model fit. Since assumptions of (multivariate) normality were violated, the Santorra-Bentler correction was applied (Byrne, 2010). Table 5.1 reports the model fit statistics for alternative models. A single-factor model shows poor fit to the data. Alternatively, a measurement model including four factors corresponding to leadership behaviour types of the four quadrants of the CVF (Denison et al., 1995; Quinn & Rohrbaugh, 1981) fits the data acceptably well. Evaluation of fit statistics and modification indices resulted in the inclusion of four error correlations. These additions are substantively defensible, because the included error correlations only relate to items measuring similar behaviours within the same factor (Byrne, 2010). Each factor has adequate reliability above the common threshold of 0.70 (Open Systems leadership behaviour: Cronbach's $\alpha = 0.85$; Rational Goal leadership behaviour: Cronbach's $\alpha = 0.74$; Internal Process leadership behaviour: Cronbach's $\alpha = 0.82$; and Human Relations leadership behaviour: Cronbach's $\alpha = 0.73$). Since single-indicator constructs complicate identification of full SEM models, path analysis with only

observed variables was performed. Therefore, factor scores, standardized at M=0.0 and SD=1.0, were computed from the CFA to represent the leadership constructs.

As a second step, the structural path model was estimated to investigate the hypothesized relationships. A total mediation model was compared to a partial mediation model, in which the independent variable also had a direct relationship with the dependent variables. All control variables have direct paths to the dependent variables and are all correlated among each other and with the independent variable. Fit statistics were compared (see Table 5.1), which revealed a better fit for the partial mediation model. The analysis below therefore continues with this partial mediation model.

Table 5.1. Model fit of measurement and structural models (n = 976)

Model	df	$Chi^2_{S\text{-}B}$	TLI $TLI_{S\text{-}B}$	CFI $CFI_{S\text{-}B}$	RMSEA (90% CI) $RMSEA_{S\text{-}B}$	SRMR
Measurement model						
1 factor	104	1384.29	0.746 0.758	0.780 0.790	0.129 (0.124-0.134) 0.112	0.074
4 factors	98	894.36	0.832 0.840	0.863 0.869	0.105 (0.099-0.110) 0.091	0.063
4 factors + 1 error correlation	97	715.05	0.867 0.875	0.892 0.899	0.093 (0.088-0.099) 0.081	0.059
4 factors + 2 error correlations	96	572.47	0.895 0.902	0.916 0.922	0.083 (0.077-0.088) 0.071	0.051
4 factors + 3 error correlations	95	485.65	0.913 0.919	0.931 0.936	0.075 (0.070-0.081) 0.065	0.048
4 factors + 4 error correlations	94	452.50	0.919 0.925	0.936 0.941	0.073 (0.067-0.079) 0.063	0.044
Structural model						
Total mediation	12	56.717	0.982 0.981	0.996 0.996	0.061 (0.045-0.077) 0.062	0.033
Partial mediation	8	22.599	0.991 0.991	0.999 0.999	0.043 (0.022-0.064) 0.043	0.016

Note: all $Chi^2_{S\text{-}B}$ values are significant at $p<0.01$.

5.4 Results

Descriptive statistics

Table 5.2 displays means, standard deviations, and bivariate correlations of all variables. Variation on all key variables is present. Respondents score just below the scale mid-point for centrality of leadership identity (M=4.18, SD=2.264), indicating that their occupational identity is slightly more important than a leadership identity, yet the latter is also substantial. Put in perspective: Grøn et al. (2020) observed the opposite balance in their sample of managers (M=6.75, SD=1.94). Importantly, the dependent, independent, and mediating variables show significant and positive associations, in line with the theoretical expectations. To what extent the variation in leadership identity centrality and prior management experience can account for variation in leadership behaviour activity will be examined next.

Hypothesis testing

Table 5.3 shows the partial mediation path model with all direct and indirect effects. Looking at the control variables, only a few significant relationships appear. The effect of education is positive and significant for Open Systems, Rational Goal, and Human Relations leadership behaviour. Respondents working for municipalities in contrast to universities report significantly more activity for Open Systems and Human Relations leadership behaviour.

All direct paths from centrality of leadership identity to the four types of leadership behaviour are positive and significant (Open Systems leadership behaviour: B=.314; Internal Process leadership behaviour: B=.296; Rational Goal leadership behaviour: B=.308; Human Relations leadership behaviour: B=.316, all p<.001). Noteworthy are the differences in effect sizes: whereas Human Relations leadership behaviour only changes with b=.052 for each step on the scale towards a more central leadership identity, the effect size for Rational Goal leadership behaviour is more than double that size (b=.127). Still, the pattern holds for the whole repertoire of behaviours, providing support for hypothesis 1. The centrality of leadership identity itself can be explained by formal leadership experience in management positions, with every additional year of such experience being associated with a shift of .066 towards a more central leadership identity (b=.066; SE=.012; B=.188; p=.000; R^2=.036; not displayed in Table 5.3). Despite the weakness of this effect, it is significant and in the expected direction in support of hypothesis 2.

Table 5.2. Descriptive statistics, bivariate correlations, and reliability statistics in diagonal (n = 976) [a]

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1 Leadership OS	3.68	1.131	.85										
2 Leadership RG	3.95	1.103	.611**	.74									
3 Leadership IP	3.87	1.031	.542**	.748**	.82								
4 Leadership HR	4.32	.884	.607**	.631**	.597**	.73							
5 Centrality leadership identity	4.18	2.264	.305**	.292**	.289**	.268**	-						
6 Management experience	3.43	6.464	.204**	.211**	.199**	.156**	.188**	-					
7 Gender	.40	n/a	-.089**	-.041	-.022	.024	-.044	-.152**	-				
8 Age	54.66	7.715	-0.052	.012	-.010	-.013	-.001	.238**	-.134**	-			
9 Education	5[b]	n/a	.216**	.004	-.002	.060	-.082*	.025	.101**	-.167**	-		
10 Experience current position	10.80	8.224	-.108**	-.075*	-.026	-.044	-.022	-.091**	-.038	.233**	-.111**	-	
11 Size organizational unit	3[b]	n/a	.034	.044	.045	.031	.082*	.043	-.009	.026	-.097**	.022	-
12 Universities	.21	n/a	-.002	-.061	-.025	-.028	-.113**	-.012	.082*	-.011	.319**	.015	-.201**
13 UMCs	.14	n/a	-.067*	-.043	.014	.016	.001	-.061	.132**	-.073*	.077*	.127**	-.014
14 Police	.18	n/a	-.046	.016	-.025	.038	.083**	.106**	-.146**	.031	-.260**	-.054	.170**
15 Municipalities	.47	n/a	.084**	.068*	.029	-.018	.027	-.029	-.047	.037	-.114**	-.060	.044

**p<0.01; *p<0.05

[a] Means, standard deviations, and bivariate correlations were calculated based on the sum scores rather than factor scores of the dependent variables for ease of interpretation.

[b] Median provided for ordinal variables.

Table 5.3. Structural partial mediation model including control variables ($n = 976$)

	Leadership OS				Leadership IP				Leadership RG				Leadership HR			
	b	**S.E.**	**B**	**p**	**b**	**S.E.**	**B**	**p**	**b**	**S.E.**	**B**	**p**	**b**	**S.E.**	**B**	**p**
Direct effects																
Control variables																
Gender	-.079	.047	-.051	.093	-.013	.050	-.008	.791	-.031	.059	-.017	.592	-.020	.023	-.027	.386
Age	-.004	.003	-.044	.161	-.004	.003	-.041	.198	-.004	.004	-.036	.256	-.002	.002	-.039	.222
Years current position	-.004	.003	-.044	.175	-.002	.003	-.021	.545	-.003	.004	-.030	.373	-.002	.002	-.037	.262
Education	.094	.016	.189	.000	.015	.017	.030	.369	.043	.020	.072	.031	.030	.008	.124	.000
Size organizational unit	.016	.022	.023	.464	.021	.023	.029	.373	.022	.027	.025	.429	.009	.011	.025	.420
UMC[a]	-.023	.075	-.010	.758	.024	.081	.011	.771	.016	.095	.006	.867	.004	.038	.004	.909
Police[a]	.028	.083	.014	.738	-.036	.085	-.018	.666	.010	.100	.004	.923	.016	.040	.016	.696
Municipality[a]	.136	.059	.088	.022	.082	.065	.045	.267	.126	.075	.067	.091	.058	.029	.078	.047
Independent variable																
Management experience	.019	.004	.156	.000	.022	.004	.179	.000	.025	.004	.176	.000	.010	.002	.168	.000
Mediating variable																
Centrality leadership identity	.107	.010	.314	.000	.103	.011	.296	.000	.127	.013	.308	.000	.052	.005	.316	.000
Indirect effects																
Management experience through leadership identity	.007	.001	.059	.000	.007	.001	.056	.000	.008	.002	.058	.000	.003	.001	.060	.000
R^2	**.192**				**.143**				**.158**				**.172**			

[a] Reference category sector = universities.

Furthermore, the indirect paths from formal leadership experience in management positions through centrality of leadership identity to all four types of leadership behaviour are positive and significant. Thus, the data support hypothesis 3. These findings qualify the indirect relationships as mediation, though the coefficients signal only a weak association (Open Systems leadership behaviour: B=.059; Internal Process leadership behaviour: B=.056; Rational Goal leadership behaviour: B=.058; Human Relations leadership behaviour: B=.060, all p<.001). Again, the effect size of the mediated path for Human Relations leadership behaviour (b=.003) is less than half the size than for the other types of leadership behaviour. The mediation also has to be considered as partial only, since formal leadership experience in management positions also has an independent positive and significant influence on each type of leadership behaviour (Open Systems leadership behaviour: B=.156; Internal Process leadership behaviour: B=.179; Rational Goal leadership behaviour: B=.176; Human Relations leadership behaviour: B=.168, all p<.001. Comparing the direct and mediated effects of the independent variable shows that the proportion of the total effect that is mediated is only modest. Respectively 27.4% (Open Systems leadership behaviour), 23.8% (Internal Process leadership behaviour), 24.8% (Rational Goal leadership behaviour), and 26.3% (Human Relations leadership behaviour) of the total effect of formal leadership experience is mediated through centrality of leadership identity, which reflects direct effect sizes being about three times as big. Still, the comparison of the direct effects of past experience and leadership identity centrality indicates that the latter is more influential for each type of leadership behaviour.

5.5 Discussion

Many public organizations are evolving into bureaucracies that incorporate more flexible structures. As formal authority becomes more distributed and collaboration across boundaries becomes more common, a clear command structure through the hierarchy becomes less straightforward. Consequently, the leadership role is no longer exclusively reserved for formal managers. This research ties into these developments at the individual level of those who are more and more assumed to step into a leadership role, although their formal position does not explicate that as part of their role: non-managerial employees.

This study confirms that studying leadership identity for organizational members who are not formal managers is relevant to understand their leadership behaviour. The data relate that non-managerial employees identify not only with their occupational role, but frequently also have a partial leadership identity. Moreover, leadership identity is more central for individuals with prior management experience, which indicates that an internalized leadership identity is not solely embedded in specific managerial positions, but transcends them (Ibarra et al., 2014). This invites follow-up questions about another group of interest for distributed forms of leadership: hybrid managers with substantive responsibilities for specified projects, but without hierarchical formal authority over personnel and resources (Mintzberg, 1979; Gronn, 2002). Future research could take job characteristics and role expectations into account to understand the relationships between leadership identity and behaviour better.

Furthermore, the analyses show that non-managerial organizational members with a more central leadership identity are more likely to step into leadership roles, since they are more actively engaging in leadership behaviour. This is in part a result of their experience in formal leadership positions in the past, in line with the hypotheses. However, it should be noted that the mediation is weak and only partial. This means that past managerial experience has an influence on leadership behaviour for additional and stronger reasons than through identification as a leader. Still, the association of leadership behaviour with leadership identity is stronger than the direct relationship with past managerial experience. This indicates that leadership identity is a relevant concept to understand leadership behaviour of non-employees better, but how the identification mechanism for this group is activated needs more research.

Focussing specifically on leadership behaviour, a notable contribution of this study is that this conclusion applies to the whole repertoire of leadership behaviours. It therefore underlines the relevance of taking a varied repertoire of behaviours into account, also when studying others than managers. Nevertheless, some differences in relationship strength appeared for the various types of leadership. Behaviours that can be described as more formal leadership (in particular Rational Goal leadership behaviours) were more affected by the leadership identity than behaviours related to social and group relations (Human Relations leadership behaviours). This is in line with arguments of Grøn et al. (2020) that the recognition of oneself as leader is necessary to perform leadership behaviours that relate to goal-oriented decision-making in line with the organizational strategy. When someone has done that before

as a manager, it may feel less out of step with their current role to contribute to such processes. Without the formal authority of a managerial position, there may be more perceived barriers to take on a leadership role and, consequently, limits to what can be expected from this group in terms of leadership behaviour.

These findings have implications for theorizing about broader participation in leadership. To advance these insights further, connecting to two lines of research seems particularly fruitful. Firstly, a connection with implicit leadership theories (ILTs) emerges, which is of growing interest in the public management literature (e.g., Vogel & Werkmeister, 2021). ILTs refer to the ideas people have about what leadership is and who is a leader based on prototypes of typical leaders and leadership (Lord et al., 2020). When organizational members not readily linked to such prototypes become more important for organizational leadership, follow-up research could explicitly address the social processes underlying leadership development and examine how ILTs relate to the development of leadership identity in general and among non-managerial employees in particular. In the social dynamics of claiming and granting leadership identities, ILTs come into play and are a useful angle to gain more understanding at the individual and group level. It would be particularly relevant to distinguish between ILTs that are more hierarchical (groups have a single leader and leadership and follower identities are mutually exclusive) or more shared (groups can have multiple leaders and leadership and follower identities can co-exist) (DeRue & Ashford, 2010). Building on DeRue and Ashford (2010), it can then be argued that it is important for organizations with ambitions for increasing participation of non-managerial employees in leadership to consider what type of ILTs are current among their ranks and to stimulate shared views of leadership as a shared process.

Secondly, this research has focused on the individual level; another approach to understand leadership as a distributed phenomenon better is to adopt a system-centred approach that analyses leadership at the collective level (Currie et al., 2009; Fitzgerald et al., 2013; Ospina, 2017; Zeier et al., 2021). One recommendation is to study the social dynamics of leadership identity and behaviour on the level of groups or organizations separately as well as in combination with individual level inquiry. Questions relate to who accepts who as leader and who lets who lead, which would shed new light on leadership as a collective endeavour. In connection to ILTs, it could further be examined to what extent such practices are in line with ideas about what makes someone a leader and how many leaders can be active in parallel (DeRue & Ashford, 2010; Marchiondo et al., 2015; Epitopraki et al., 2017).

Furthermore, to what extent leadership expectations are incorporated into job descriptions and role conceptions of non-managerial positions, and how that relates to shared ILTs merits study. A further step is to investigate organizational culture, dominant ILTs, and how those relate to ideas and realities of distributed leadership. Relational acceptance and collective recognition require research beyond the individual level to grasp the social process.

Besides implications for theorizing, this study practical implications that could contribute to leadership development in public organizations. Since it was found that a more central leadership identity goes hand in hand with more leadership behaviour, leadership identity offers a leverage point to activate leadership capacity among non-managerial employees to accommodate a growing need from distributed forms of leadership. In particular, the finding that a leadership identity is not solely embedded in formal leadership positions indicates this potential, because it means that fostering a leadership identity among non-managerial employees could be a way to stimulate broader participation in leadership throughout organizations. Explicating what employees can do and are expected to do as part of their job helps them to adopt a leadership role and identity. Moreover, organizations could facilitate learning among colleagues, since employees with more formal leadership experience were found to use more leadership behaviour. Such former managers could act as examples for other non-managerial employees to engage in leadership (first to assume more leadership identity, then to act upon it), by drawing on their own past experiences.

Limitations

Several limitations require some caution in drawing conclusions. Firstly, the cross-sectional design hampers the ability to make claims about causality in the model. Here it was argued that the development of leadership identity is a consequence of gaining experience in managerial positions. In contrast, it could be argued that individuals with a more central leadership identity seek out more opportunities to enact that identity and practise skills by pursuing formal leadership positions (Miscenko et al., 2017). Likewise, the centrality of leadership identity and engagement in leadership behaviour could mutually influence each other. While self-perception theory (Bem, 1972) supports that individuals derive a stronger sense of self as a leader from their past experience in management positions (in line with the current study), it would also support that engaging in leadership behaviour would feed a more central leadership identity (Miscenko et al., 2017) (in contrast

to this study). Feedback loops are plausible and require follow-up research, which should be tested in longitudinal designs.

Secondly, the measurement of the central concepts has some limitations. The measurement model of leadership behaviour included several items with weaker factor loadings, at the expense of construct validity. Moreover, error correlations within factors were included in the model to achieve better fit to the data. Since the instrument to capture the leadership behaviour repertoire is relatively new and was not used before to examine leadership behaviour of non-managerial employees, this study was an opportunity to explore the utility of this measurement. Based on the results, improvement is advisable to draw conclusions about effects on different types of leadership behaviour more confidently.

In addition, the measurement of leadership identity and formal leadership experience convey limited information. Respondents were not asked how they understand a leadership role, so no insight in how ILTs impact the studied relationships is available. Moreover, the contrasting of occupational and leadership identities in a single measure of identity centrality may forego the existence of a professional leadership identity with a distinct effect on leadership behaviour. Grøn et al. (2020) did not find that managers with a balanced occupational–leadership identity use more leadership aimed at professional development, indicating against this. Yet, if a separate type of identity exists for non-managerial employees cannot be ruled out. The measurement of experience necessitates the assumption that more years of experience indicate more opportunities to develop and a qualitatively richer experience. Prior studies show that type of management position, span of control, hierarchical level in an organization, and amount of leadership training play a role in leadership identity development (Dragoni et al., 2011; Grøn et al., 2020).

Finally, the sample was not selected randomly and is likely not fully representative for the population in terms of gender and age. The sampling frame contains a bias in favour of men and older employees, which also appears in the sample with a majority of male respondents and very low response by employees below the age of 30. Gender and age, however, do not seem to confound the relationships of interest in this study. Both in models that include and exclude these control variables, the relationships between formal leadership experience, centrality of leadership identity, and engagement in leadership behaviours are positive and significant. Still, it would be of theoretical value to further study the role of gender. The literature points at generally less management experience and less developed leadership identity among women due to the stereotype

'think manager, think male' and ILTs that may one's identification with a leadership role less likely (e.g., Ibarra et al., 2014). In light of expectations of broader participation in organizational leadership, understanding possible barriers for a large share of the workforce seems necessary.

5.6 Conclusion

This study has two main contributions for the public management literature on leadership: creating insight in leadership behaviour as a repertoire by non-managerial employees in public organizations and demonstrating that leadership identity is a meaningful lens to explain why this group engages in leadership behaviour. Thereby this study feeds into discussions about distributed forms of leadership, in which this group of organizational members increasingly plays a role. Public organizations can take away that leadership development throughout organizations can be stimulated by encouraging a leadership identity for non-managerial employees to participate in leadership.

Chapter 6

Conclusions and discussion

6.1 A study of leadership behaviour repertoires in public organizations

Leadership in today's public organizations is an important and challenging affair. Over the years, multiple ideas about management in the public sector have been introduced and supplemented again by others. As a result, public organizations are characterized by various overlapping structures and modes of organizing. How leadership is embedded in organizations has also been affected by these developments. Moving away from the straightforwardness of the hierarchy towards 'boundaryless' and post-bureaucratic forms of organizing has brought about a partial decoupling of leadership from formal positions in the hierarchy. Organizational members throughout organizations, with but also without managerial positions, are expected to engage in leadership behaviour. The parallel structures create ambiguity and complexity in the organization of leadership, which provides room for manoeuvre as well as challenges. In this light, it is imperative to look at leadership behaviour and how it takes shape.

Amid these developments in organizing in the public sector, new questions about leadership emerge that the existing literature cannot answer yet. Although the field has a rich literature on leadership, several gaps were identified: there has been only scarce attention for leadership as dependent variable; most research has used a limited conceptualization of leadership behaviour (usually as motivating individual subordinates); and studies have focused almost exclusively on leadership by formal managers. This dissertation has attempted to address these issues and provides some pieces to the puzzle to understand leadership behaviour in public organizations better. Drawing on four empirical studies presented in the previous chapters, this dissertation set out to answer a central research question:

How do leadership behaviour repertoires take shape in public organizations?

Based on the presented studies, a threefold answer can be given. Firstly, leadership as behaviour can be understood as a repertoire, that spans a variety of behaviour types and directions in which they can be used. Secondly, the use of leadership behaviour repertoires takes shape in relation to the context in which it is used. Thirdly, engaging in leadership behaviour is not exclusive for organizational members in formal leadership positions. These conclusions are elaborated below.

6.2 Conclusions

Leadership behaviour as repertoire

In the first place, it can be concluded that it is important to look at behaviour of individual organizational members to understand the process of leadership better and that this behaviour is best conceived as a repertoire. Conceptualizing leadership behaviour as a repertoire means a comprehensive view of leadership that expresses the range of behavioural options that organizational members engaging in leadership can draw on. Chapter 2 has shown that formal leaders use a range of different behaviours, sometimes more and sometimes fewer different types in combination, to address the challenges and demands facing them. This involves behaviours ranging from networking and collaborating, directing and managing internal processes, envisioning and facilitating change, to inspiring, creating commitment, and attending to individual needs. Moreover, they do this in a 360-degree fashion: formal leaders do not only act in downward direction in relation to their subordinate employees; they also work to influence their peers across the organization (sidewards), their superiors higher in the hierarchy (upwards), and external relations/partners outside their own organization (outwards). This results in a view of leadership that varies in complexity of repertoire use: how many different behaviour types and in how many directions towards other actors they use their repertoire is variable over time and between situations and issues at stake. In this way, the repertoire perspective matches what leadership behaviour looks like in practice to deal with intertwined issues and challenges, which therefore has advantages in studying leadership. This also answers the first sub-question (*How can leadership in an ambiguous context be conceptualized as a behaviour repertoire?*).

Focused on the behaviour type dimension of the repertoire, the utility of this conceptualization in studying leadership is further demonstrated in Chapter 3. The repertoire perspective has made visible that (formal) leaders behave

differently across situations, by showing that the breath of the used behaviours from the repertoire varies. The significant within-person variation in behaviour demonstrates that characterizing leadership of organizational members in terms of their overall style is too simplistic. It also shows that (formal) leaders take multiple issues into account in how they cope with demands put on them, which highlights that leadership involves more than supervising employees. Moreover, in Chapter 4, the repertoire conceptualization facilitated a test of variation between organizational members with and without formal leadership positions that allowed for more variation to come to light. The two groups did not engage in all types of behaviour from the repertoire in the same way when bureaucratic conditions were accounted for. Use of some types of behaviour appears to be more sensitive to circumstances than others. This means that a repertoire conceptualization can generate more nuanced results when studying leadership as dependent variable. It therefore proved to be useful to shed light on leadership as a comprehensive phenomenon to be able to deal with the diversity of demands and challenges involved in managing a group, unit, or organization.

Leadership behaviour repertoire use depends on context

The second conclusion that can be drawn from this dissertation is that leadership behaviour takes shape in relation to the context in which it is performed. While it seems evident that behaviour is situational, academic researchers nor practitioners tend to pay explicit attention to this. Factors in the situational and organizational context can explain how leadership behaviour repertoires are used, answering the sub-question *To what extent can aspects of the public organization context explain the use of leadership behaviour repertoires?* In two explanatory studies presented in Chapter 3 and Chapter 4, it was found that leadership behaviour and use of the repertoire changes in relation to context. The two chapters draw on different types of evidence to test various explanations. In Chapter 3, it was found that individuals adapt their leadership behaviour to match the demands present in different situations they encounter. Ambiguity constrains the variety of leadership behaviours used: higher levels of ambiguity, visible in more different competing demands, seem to offer more leeway to prioritize and focus on fewer issues and consequently, to narrow the range of the repertoire used, whereas more pressure to do it all is experienced with simultaneously competing core issues. When faced with different dilemmas, the same person uses her repertoire in a different way. The experimental evidence offers support for this situation-based adaptation of

leadership behaviour to context and shows the importance of accounting for factors that are highly variable throughout the day.

On the basis of the analysis of cross-sectional data in Chapter 4, it can also be concluded that the use of leadership behaviour repertoires takes shape dependent on the organizational context. The analyses showed that environmental complexity seems to require leadership, as it stimulates activity on all types of leadership behaviour. This applies to organizational members with and without formal leadership positions alike. Also the bureaucratic structure of public organizations affects behaviour, but in different ways for the two groups. Perceived formalization appeared to be associated with lower activity on innovating and brokering behaviours, but more strongly for non-managerial employees than for managers. Both groups used coordinating and monitoring behaviours more frequently by as they perceived more formalization, but this effect was stronger for managers. Regarding behaviours oriented to group dynamics and individual needs, the greater activity of formal managers became more pronounced when the division of authority and responsibilities was perceived to be stronger. Taking these findings together, it leads to the conclusion that the organizational context can both empower and hinder organizational members to use their leadership behaviour repertoire. Since developments in organizing in the public sector have substantial impact on dilemmas, structures, and environments, this conclusion means that it is necessary to not only look at the effects of leadership, but also warrants attention for the context in which leadership behaviour is performed.

Leadership is not exclusive for formal managers

The third conclusion of this dissertation is that we should not treat leadership as a synonym for formal managerial positions in the organizational hierarchy. This research shows that organizational members, regardless of their formal position in the hierarchy, can contribute to leadership in public organizations. Whereas position-based leadership expectations exist for formal managers (Mintzberg, 1979), non-managerial employees without such institutionalized expectations are also actively engaging in organizational leadership. Still, distinctions between these groups are observed in this research and it can be concluded that formal authority and position matter. From Chapter 3 it can be learned that having formal authority over resources, personnel, and policy decisions provides more latitude for a more varied repertoire use, while lacking such authority resulted in the use of fewer types of behaviour. In line with these findings, Chapter 4 showed that

organizational members with formal leadership positions are more active on all types of leadership behaviour compared to those without such positions. Formal managers are also held back less by bureaucratic barriers. Together, these studies show that structures impact opportunities for behaviour, since organizational members with formal authority and formal positions of leadership generally have more options to perform leadership behaviour.

Yet, these studies also show that lacking such authority or position does not prevent employees from engaging in leadership. Despite comparatively less activity, non-managerial employees prove to be a potential resource in organizational leadership. Why they engage in leadership can be explained by the centrality of their leadership identity and past managerial experience. In Chapter 5, evidence from a survey in four public sectors shows that employees with a more central leadership identity, relative to their occupational identity, are more actively engaged in all types of leadership behaviour than employees whose leadership identities are relatively less central. Past experience in managerial positions is part of the explanation for differences in how central the leadership identity is. This demonstrates that leadership is not exclusive for formal managers, as identification with a leadership role is not solely embedded in positions. Although position matters, individual experiences and attitudes also matter. Despite their lack of formal leadership positions, it can be concluded that identity theory is helpful to understand leadership of non-managerial employees better – also the answer to the third sub-question (*To what extent can the use of leadership behaviour repertoires by non-managerial employees in public organizations be explained by leadership identity and formal leadership experience?*).

6.3 Discussion

What do these conclusions mean for how we understand leadership amid the sketched trends in public sector organizing? And which questions remain or are raised by these conclusions? The discussion below addresses implications for research and practice, including recommendations for further research.

Theoretical implications

On a theoretical level, this dissertation has implications for research on leadership in public organizations characterized by multiple overlapping forms of organizing.

It was found that a more comprehensive view of leadership, conceptualized as a repertoire, is useful in studying leadership in public organizations. It offers means to reveal variation as well as generate a more complete view of what practising leadership involves. Consequently, such insights could generate more nuance in explanations. Besides relevance for studying leadership as dependent variable, this could possibly benefit research that treats leadership as explanation for other phenomena. By distinguishing between types of behaviour and considering this variety in coherence, more subtle effects could be found. For instance, if leadership behaviour aimed at creating a vision and setting goals to realize that ambition is not complemented by actions to involve stakeholders, pay attention to individual needs, and keep an eye on processes and progress, other organizational members may not feel committed to the vision and performance could slow. Taking a repertoire perspective could illuminate the effects of behaviours in coherence. This could also be of use to shine a new light on unexpected or contradictory findings.

While this research has looked at leadership from an *intra*organizational perspective, a step further would be an *inter*organizational application of the repertoire conceptualization to study leadership behaviour of individuals. Collaborative, boundary-crossing arrangements have become a common element of organizing in the public sector with implications for the individual level of analysis. Different streams of public management research have an interest in these developments, such as researchers of organizational behaviour in post-bureaucratic structures (e.g., Bernards, 2021; Groeneveld & Kuipers, 2014; van der Voet & Steijn, 2021), distributed leadership (e.g., Currie et al., 2009; Fitzgerald et al., 2013; Zeier et al., 2021), and collaborative governance scholars (e.g., Bryson et al., 2015; Cristofoli et al., 2019; Crosby & Bryson, 2005, 2010; Crosby et al., 2017; Sørensen et al., 2017). While studies in these various traditions examine leadership, they focus on different types of questions related to different conceptualizations of leadership and levels of analysis. Besides, these streams are generally misaligned and not speaking to each other, which was also signalled in Chapter 2. The repertoire conceptualization holds potential to connect research traditions by providing a lens to study the behaviour of individuals within collaborative and cross-boundary settings.

The findings in this dissertation also show that the use of leadership behaviour repertoires takes various shapes – between individuals as well as for the same individual between different situations. While the majority of research on leadership behaviour takes an approach that keeps such variety hidden behind the overall style, this project provides support for the notion that combinations of various behaviours

in patterns over time are of particular importance. Based on her research on managing strategic paradoxes, Smith (2014) argues that not the individual decisions, or acts of leadership behaviour, make the difference, but that the pattern of combined decisions, or uses of the leadership behaviour repertoire, is most important. Shedding light on variation and adding more nuance in patterns of leadership behaviour can be facilitated by the repertoire conceptualization. Variation in the repertoire, combined with a within-person approach, could also be adopted to study such questions. Here it can contribute to advancing further theorizing and research.

In light of the complex organizational structures comprised of multiple overlapping and parallel forms of organizing that are characteristic of many public organizations, the conclusion that this context impacts opportunities for behaviour is important. Whereas in the survey, context factors related to organizational structure and environmental complexity were studied as individuals' perceptions about their organization in general, the vignette experiment focused on situational variation in context. The conclusion that leadership behaviour varies along with contextual variation emphasizes the value of disaggregating perceptions of context. Taking a more situational approach to studying context variables in relation to leadership behaviour is also supported by research on uncertainty related to rules in organizations. Bernards et al. (2021) found that rules are perceived quite variably throughout a week. Besides more attention for variation in leadership behaviour, future research should also zoom in on the variability of organizational context throughout the day or week to get to better grips with the mechanisms through which context influences leadership behaviour.

Throughout this dissertation, context was treated in line with Johns' (2006) conceptualization. This means that context factors were considered to be external factors that have an influence in the direction of leadership behaviour. The research thus focused on agency within structure, a choice based on the puzzle informing the main research question of this dissertation. However, it can be argued that an influence in the other direction is possible and that agency can shape and perpetuate structures (e.g., Wallace & Tomlinson, 2010). In the interviews conducted for the studies presented in Chapter 2 and Chapter 3, participants talked about examples that indeed reflect this dynamic of leadership trying to adapt structures to accomplish their goals. Yet, the interactive process of agency and structure that mutually impact each other was not accounted for in the hypothesis testing, which focused on explaining how leadership behaviour itself takes shape. In light of this dissertation's findings that structure can enable or complicate the use of

leadership behaviour repertoires, it would be relevant to study how leadership behaviour repertoire use and structures dynamically shape each other. This could help us better understand leadership in organizations with increasingly common complex and parallel structures.

This research also has implications for the public management literature on leadership as a distributed phenomenon. Amid the sketched developments in organizing, participation of a broader range of organizational members in leadership is expected. In contrast to the standing literature that almost exclusively studied leadership by formal managers (Ospina, 2017; Vogel & Masal, 2015), this research has paid explicit attention to a group in organizations that is increasingly important in this respect: employees without formal leadership positions. It was found that this group can be seen as a resource in organizational leadership, as they are engaged in leadership behaviour from across the repertoire. This shows the relevance of including non-managerial employees in research on leadership behaviour. Since collective and distributed conceptions of leadership gain more momentum in public management (e.g., Jakobsen et al., 2021; Kjeldsen, 2019; Kjeldsen & van der Voet, 2021; Ospina, 2017), it is time that this group is more often taken into account as leaders and not only as followers. The term leader still typically denotes a formal manager. At the start of this research, this was also the main focus, but this has shifted as a result of new insights.

Although the empirical studies focused on experiences and accounts of individuals, the insights derived from this research are relevant for the discussion of more distributed forms of leadership, since the behaviour of individuals lays at its base. Questions that remain concern the social dynamics of leadership in interpersonal processes at the group and organizational level (Bolden, 2011; DeRue & Ashford, 2010; Gronn, 2002). Here it was found that leadership behaviour is used in a 360-degree fashion, in relation to a varied set of stakeholders. Moving beyond the individual accounts of these relationships, the relational dimension could be further examined by observing interactions and group processes directly and by studying perspectives of multiple actors involved in the same encounters. Understanding how leadership as distributed phenomenon takes shape, with a different unit of analysis at the group or organizational level, can then be moved forward.

Identity theory and concepts can be useful to further explore how non-managerial employees participate in organizational leadership. Follow-up research could build on this and the work of Grøn et al. (2021) to study the development and enactment of leadership identity of a broader range of organizational members.

Possible questions relate to how leadership training and organizational culture affect this as well as how it affects dynamics of distributed leadership. The role of implicit leadership theories (ILTs), which is upcoming as topic of interest in public management (e.g., Vogel & Werkmeister, 2021), can provide a useful lens in connecting these concepts at the individual and group level. ILTs concern people's ideas about what leadership is and who is a leader, informed by prototypes of typical leaders and leadership (Lord et al., 2020). Though ILTs reside at the individual level, they could be affected by group norms and organizational culture as well as organizing paradigms (DeRue & Ashford, 2010). As the traditional bureaucracy makes clear distinctions between hierarchical managers and non-managerial employees and designates leadership responsibilities and authority to those in formal management positions, a hierarchical view of leadership typically informs ILTs. It could be argued that other organizational members should have ILTs that are open to leadership by non-managerial employees if they are to recognize someone as a leader, to acknowledge their leadership identity, and ultimately, to follow them.

Methodological implications

Also methodologically, this dissertation offers contributions for the public management literature with implications for future research. In the first place, the combination of experimental and in-depth qualitative methods has proven to be useful in facilitating experimental realism. The vignette experiment presented in Chapter 3 shows this in two ways: it was developed on the basis of an "actual derived cases" approach (Shepherd & Zacharakis, 1999) and involved an interview procedure of data collection. To develop the vignettes, issues and situations discussed by multiple participants in the exploratory interview study in Chapter 2 served as inspiration. The experimental treatments therefore resembled realistic situations encountered by the study participants. The data collection procedure in an interview setting provided further confidence in the experiment's realism. When responding to the vignettes, participants recounted situations and cases in which they faced similar demands and how they acted in those instances. This indicates that participants recognized the treatments as realistic. Moreover, these accounts of past behaviour in similar situations strengthen confidence in the realism of participants' responses to the vignettes. Although vignettes are hypothetical and primarily elicit responses of intended behaviour (Jenkins et al., 2010), the connection to past behaviour in comparable cases triggered participants

to give concrete and detailed answers, which makes the responses realistic. In this way, a mixed-methods approach to vignette experiments offers a controlled, yet realistic methodology with enhanced internal and external validity. It therefore holds potential to study public management questions in a way that makes meaningful contributions to both theory and practice (Bertelli & Riccucci, 2022).

A second methodological contribution and implication concerns the use of within-person designs. In Chapter 3, participants in the vignette experiment responded to a set of scenarios to test behavioural adaptation between situations. By presenting multiple vignettes to the same participant, multiple data points were collected and variation in the same participant's responses could be assessed to examine a previously untested hypothesis. As the data showed significant variation in how participants would act across the various scenarios, this research demonstrates the theoretical advantage of this design. In contrast to survey experiments presenting each participant with a single vignette or a cross-sectional survey asking about general aggregated patterns, the within-person vignette experiment gives insight in how behaviour varies and changes between situations. It therefore offers a more nuanced view of participants' leadership behaviour and at the same offers the opportunity to test hypotheses of behavioural adaptation directly. These benefits could well translate to other public management questions that concern organizational behaviour as well as change management.

Thirdly, Chapter 4 and Chapter 5 have demonstrated the complementary value of the more traditional survey design to understand leadership as a repertoire. A survey enables us to obtain data about the full repertoire of leadership behaviours for a large group of organizational members. A next step that is possible in a survey design would be to map the use of the repertoire on the group or organizational level. The patterns of activity and distribution of leadership roles throughout an organization could come to light through such research. Complementing existing qualitative in-depth research on distributed leadership (e.g., Currie et al., 2009; Fitzgerald et al., 2013), such survey-based mapping can help to learn more about distributed forms of leadership. This is particularly insightful, because distributed leadership assumes a communal pattern that can be more or less orchestrated or emergent (Gronn, 2002). How patterns of distributing leadership roles emerge and are enacted could be further studied with experimental designs that focus on groups as unit of analysis. Getting more insight in the social dynamics within groups would advance our understanding of leadership by a broader set of organizational members.

Practical implications

Finally, the conclusions present implications for professionals and public organizations. Appreciating leadership behaviour as a repertoire of options recognizes the realities of leadership in public organizations. Public professionals often have to juggle and balance various goals, ambitions, and plans that affect stakeholders and interests in different ways (Head, 2010). As the opening example of Francis also illustrated, this requires acting in many different ways in relation to multiple stakeholders throughout and outside one's organization. To create value for the public – through all sorts of collaborations or processes within a public organization – it is essential that a variety of leadership behaviours is combined. Seeing leadership as behaviour that can take on many shapes opens up thinking in terms of options for manoeuvring and helps to address the multiple challenges in public organizations.

Furthermore, the insights derived from this dissertation can help to use existing knowledge about the relationship between leadership and a range of outcomes more effectively. This is possible by raising new awareness of the role of context in shaping what organizational members can do and how they use their leadership behaviour repertoire. In particular, this research points at several factors of influence in many public organizations: ambiguity stemming from diversity of competing interests, bureaucratic characteristics like formalization and strict division of authority posing barriers, and complexity of the environment creating a need and opportunities for leadership. Keeping this in mind could help in arranging work processes and collaborations that facilitate organizational members to contribute to leadership. Creating such contextual awareness on the side of organizational members with and without formal leadership positions could help them to reflect on their own leadership behaviour and use their repertoire with more sensitivity to the context in which they operate.

To cultivate broad participation in leadership throughout organizations further, organizations should recognize and facilitate the leadership potential of not only managers, but also of non-managerial employees. This could be done by drawing on the potential for identification with leadership roles outside of formal management positions. Leadership development aimed at leadership capacity throughout the organization can create a culture in which it is normal to step in. Besides leadership training, this could involve discussing what leadership is and how everyone – not only higher-level managers – can play a role in it, to create a shared image of leadership as an inclusive and collective endeavour. Moreover, role

expectations involving leadership behaviour could be discussed in job applications, performance and development reviews. Integrating the repertoire perspective in leadership development could help organizational members in different positions and roles to find options how they can use the leadership behaviour repertoire.

6.4 Limitations

Careful theoretical and methodological considerations notwithstanding, several limitations of the research for this dissertation need to be acknowledged. Firstly, all studies in this dissertation relied on self-reports of leadership behaviour. Self-reports and intended behaviour measures are not likely to retrieve exactly what behaviour has been used without some error. Critique in the literature points at the conflation of concepts of perceived and actual leadership behaviour by using proxy measures instead of actual behavioural measures (Banks et al., 2021). In other words: critics argue that there is a risk that the data do not match the concepts. Moreover, a risk of self-serving bias exists when participants are asked to describe their own behaviour. Research has demonstrated a self–other rating discrepancy of leadership behaviour between supervisors and their subordinates, with the latter deemed to be more reliable or accurate than the self-ratings to explain outcomes (Jacobsen & Andersen, 2015; Kjeldsen & Andersen, 2021; Vogel & Kroll, 2019).

Despite the downsides of self-reported data on leadership behaviour, it was considered a suitable measurement considering the questions this dissertation addresses. Self-reported data are informed by other information, in particular concerning intentions behind enacted leadership behaviour. While others need to pick up on leadership behaviour to be influenced by it and, hence, other-ratings of leadership behaviour have clear benefits to explain outcomes, the question why organizational members use leadership behaviour the way they do is served well by self-ratings. Moreover, the studies in Chapter 2 and Chapter 3 are based on in-depth interview data. This is particularly relevant to nuance the risk involved in the vignette experiment: while participants provided their intended behavioural response to the scenarios, they often elaborated their answer by referring to how they acted in a similar situation in their own organization. These detailed examples provide some confidence that research participants could provide meaningful data about their own leadership behaviour. To test the robustness of this dissertation's

findings, it is advised to triangulate different types of measures for leadership behaviour from multiple sources.

Furthermore, this dissertation related somewhat contrasting and unexpected findings regarding the influence of elements in the organizational structure on leadership behaviour, which could be connected to the use of objective vs. subjective measures. Formal authority as operationalized in the vignette's role descriptions (Chapter 3) as well as formal leadership position based on the sampling frame (Chapter 4) appear to influence how leadership behaviour is exercised. Since objective measures for these characteristics of organizational structure were used, the studies provide support for their influence on leadership behaviour. Perceived subjectively measured characteristics of bureaucratic structure (Chapter 4), however, seem to have less impact. Nevertheless, the (relatively weak) relationships that were found were in line with the findings related to the more objective measures: both suggest structural constraint on behaviour. Despite criticism of the utility of subjective measures of organizational context factors (e.g., Kaufmann & Feeney, 2012; Rainey et al., 1995), other authors point at the role that interpretation of one's environment plays in one's behaviour (e.g., James & Jones, 1974; Jung, 2014; Weick et al., 2005; Wright et al., 2012). A gap between an objective evaluation and people's subjective evaluation of it may be part of the explanation of unexpected results, such as the reversed direction of the relationship in Chapter 3. What was experienced as the most difficult situation (subjective) did not match the expectation of the operationalization in the vignette (objective). This shows the importance of perceptions for understanding behaviour. As Kaufmann and Feeney (2012) argue, understanding delicate phenomena may be best studied with a combination of objective and subjective measures. Follow-up research would benefit from a combination to detect mechanisms affecting perceptions and to illuminate variation of experiences within the same structure, for instance between units within the same organization or between organizations within the same sector.

In terms of generalizability, some reservations are in place. The selection of the university sector as empirical setting was based on a typical case logic because of its characteristic ambiguity and complexity. Since these features are common for 'boundaryless' and post-bureaucratic forms of organizing throughout the public sector, this would facilitate studying the identified questions about leadership behaviour. In support of this logic, patterns were comparable across sectors in the studies of Chapter 4 and Chapter 5, in which the university sector was complemented by municipalities, police, and university medical centres.

Nevertheless, the data were collected in only one country, universities have also atypical characteristics, and differences within sectors were not included. Taking these sources of potential variation into account is necessary to determine the generalizability of the conclusions.

Moreover, several assumptions were made about the key developments of organizing in the public sector. Instead of measuring trends directly, they served as background that highlight the relevance of the question this dissertation addresses. To what extent changes in leadership are associated with changes in organizing such as bureaucratic structure or environmental complexity over time cannot be derived from this research. The cross-sectional design of the survey relied on individuals' perceptions of their organization at one point in time. Though this enabled analysing the relationship between these context factors and leadership behaviour as a correlation, it could not be concluded that the developments per se have an impact on how individuals use leadership behaviour repertoires nor could assessments of causality be made. Longitudinal designs may be used to examine this further.

In addition, leadership behaviour was studied at the individual level only and no direct analysis of distributed leadership at the collective level could be made (Bolden, 2011; Gronn, 2002; Ospina, 2017). Throughout the research, it was assumed that expectations of distributed leadership existed to some extent in organizations. Moreover, no organization wide view of patterns of individual behaviour could be generated from the data. The conclusions are therefore confined to the individual level of analysis, though they can inform theorizing about leadership as a distributed phenomenon. Collecting nested data, that enable connecting individuals to groups and/or particular organizations, could be strived for to assess if and how behaviour of individuals accumulate to a pattern of leadership distribution within organizations.

Lastly, no distinction could be made between different categories of non-managerial employees, which could include new types of managers without personnel responsibility. In the study presented in Chapter 3, the existence of non-managerial organizational members with some form of leadership position was accounted for to some extent, since the role descriptions of the vignettes also included a condition of program director without formal authority over policy decisions, personnel, and resources. In the survey of Chapter 4 and Chapter 5, however, such groups could not be distinguished and no information was collected about what respondents' positions entail. Sampling such new managers purposively should be pursued to examine and understand their activity, role, and potential in organizational leadership in more depth.

6.5 Final thoughts

This dissertation aimed to provide fresh attention for leadership in public organizations. Throughout all studies, this has been realized chiefly through broadening the perspective: on what leadership is by developing a more encompassing conceptualization of leadership behaviour and on who engages in leadership by examining leadership of a broader range of organizational members. The repertoire conceptualization of leadership behaviour reminds us that leadership behaviour takes on many forms and is used in a variety of directions in relation to multiple stakeholders. The findings point out that leadership is not something that only formal managers do. Still, the term 'leader' typically denotes a formal manager. This was also the main focus at the start of this research, which resonates in the language of the first chapters of this dissertation. As a result of new insights gained from data collection as well as from the literature, this has shifted to a more inclusive understanding and phrasing. Opening up research on leadership to a broader range of organizational members, who draw on a varied repertoire of leadership behaviours, could help the field to address questions that changing public organizations likely continue to face.

Although the repertoire perspective was developed for leadership behaviour, it could be relevant to consider other forms of organizational behaviour as a repertoire. Appreciating the options to manoeuvre and adapt ingrained in repertoire thinking could provide some freedom to experiment and find out what works for individuals and in which situations. Reflecting on the use of a behaviour repertoire can be enriched when the role of context is considered, as this research has shown that situational, organizational, and environmental characteristics matter for leadership behaviour. This dissertation reminds academics and practitioners of the value of context sensitivity towards leadership behaviour and the palette available to them to adapt – in researching and enacting it.

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Appendices

Appendix A. Interview topic list

Introduction

- Can you tell me what it means to be [director/dean/board member/project leader] within this [department/institute/faculty] (tasks/running issues and projects)?

Leadership role: How do you see your role as [...]?

- What do you find hard about your role as [...]? Can u tell about this in relation to a particular issue or event in which this featured. What did make that difficult?
- Do you experience dilemmas in your role as [...]? Have you experienced moments where different things were hard to reconcile? Where did that tension come from?
- Do you experience dilemmas between your roles as [...] and [...]?
- You have different tasks and roles. How do you combine those (simultaneously)?

Ambiguity needs: Which needs/expectations do you encounter in your role as [...]?

- Where do those needs originate from? Can you tell about this in relation to a particular issue or event in which this featured.
- What did you do then in that situation?
- Do you always do this in the same way, or is it dependent on the situation?
- What made you choose this approach?

Do you face:

a. Goals that allow room for multiple interpretations?
b. Working on both innovation/change as optimization/stability?
c. Complexity and dynamism in the environment of your [department/institute/faculty/group]?

- Do you experience tension here? Example? Where did that tension stem from?
- How did you deal with it?

As a last question for this interview: Could we go through your last week, see how the things you talked about show in how you spend your time?

Probes

- What do you mean by [...]?
- Can you give an example of that (of last week/month)?
- What did you do then?
- Can you tell more specifically which actions you undertook to do that?
- Can you take me along in the process of [...], how that went, what you were thinking?
- What did you find difficult about that?
- How did you do that?
- Can you elaborate?

Closing

- Have you missed a topic/did we not discuss something that you would like to bring to my attention?
- Did you participate in leadership training?

Appendix B. Operationalization: Dependent variable vignettes

Question: "Which actions would you undertake, and if applicable, which stakeholders would you involve?"

Table B1. Leadership behaviour categories (Denison et al., 1995, pp. 527–528).

Role	Description	Example
Innovator	The innovator is creative and envisions, encourages, and facilitates change.	"Our organization has an institute specialized in interdisciplinary education. I would talk to those people, and with those teachers. [...] And then see who is into it, so we can motivate people to participate." (#19)
		"To get it started, I have used the budget cuts to say: 'we have to change now anyway, let's do it properly right away, so it is future proof'." (#21)
		"I would say it would be best to do it with a small working-group, like in a pressure cooker, to develop it quickly and to present it to the department and in the team." (#27)
Broker	The broker is politically astute, acquires resources and maintains the unit's external legitimacy through the development, scanning, and maintenance of a network of external contacts.	"I would talk to the dean for sure, saying 'this is my problem, we're being squeezed here. Do you have a creative solution for me? Do you have something to help me relieve my people?" (#15)
		"What I would do in any case is to look at the faculty, to find out if I could get budgetary leeway for expansion." (#8)
		"When you're a bit creative, then you'll have knowledge of what's happening in the departments around you. But if you're not in your room, instead you're walking around, then you'll just see what's happening. I would really confront them." (#11)

Table B1. Leadership behaviour categories (Denison et al., 1995, pp. 527–528). *(continued)*

Role	Description	Example
Producer	The producer is the task-oriented, work-focused role. The producer seeks closure, and motivates those behaviours that will result in the completion of the group's task.	"I would engage teachers and support them if there's something they could do differently, to help them. [..] just seeing, what does the course coordinator need to get things done? So stand by the teacher." (#5) "I try to do it with my own team and to motivate the team, organizing subject-related events." (#19)
Director	The director engages in goal setting and role clarification, sets objectives, and establishes clear expectations.	"I would communicate clearly that the timeline is not realistic, that it's never a good idea to develop educational elements in a hurry, that that doesn't contribute to quality and that it therefore would be better to choose a longer trajectory for it." (#10) "Prioritizing. Making decisions. What do you give most attention?" (#14)
Coordinator	The coordinator maintains structure, does the scheduling, coordinating, and problem solving, and sees that rules and standards are met.	"See how we can use everyone optimally and what can be done by others. You could propose 'could I have a number of student assistants or a temporary staff member, can we exempt someone at the secretariat or an education coordinator to help preparing the review?" (#9) "That is also something you can make arrangements for, and say 'let's agree for this year that you'll reduce your research time, so teach more, and that you'll be compensated for it next year." (#14)
Monitor	The monitor collects and distributes information, checks on performance, and provides a sense of continuity and stability.	"Or scrutinize the ongoing teaching, to see where we can create some air, so that we can use that to develop those interdisciplinary elements." (#2) "And you'll have to organize information meetings to explain to the staff what's going on." (#3)

Table B1. Leadership behaviour categories (Denison et al., 1995, pp. 527–528). *(continued)*

Role	Description	Example
Facilitator	The facilitator encourages the expression of opinions, seeks consensus, and negotiates compromise.	"And let him also think about solutions himself. And I know most of the university staff as being dedicated. So they'll think along." (#8) "Like how will we make this work together for this year? [..] But at the moment you'll talk to people in the department, saying this is what's going on, then they might come up with completely different ideas. And then it is very important that you're open to that and seriously consider those ideas." (#18) "That's something I would want to discuss with the whole department. This is something to talk about during a staff meeting, how important do we think it is? [..] Collectively. I would ask around with everyone, and if I notice there's support for it, then we'll solve it together." (#1)
Mentor	The mentor is aware of individual needs, listens actively, is fair, supports legitimate requests, and attempts to facilitate the development of individuals.	"I'd encourage people with ambitions in teaching to take courses to develop. So I'd also be proactive in that, seeing which trainings are available, and are they suitable candidates for such courses?" (#29) "I notice that people experience it, despite the high work pressure, as a source of energy and say 'that seems fun to me, if I can do that with this and that colleague'. That gives energy and brings some leeway." (#5)

Appendix C. Operationalization: Survey measures

Table C1. Survey measures

Leadership behaviour – Denison et al. (1995) (Cronbach's α = 0.92)	
Open Systems leadership behaviour (Cronbach's α = 0.84): Come up with inventive ideas. Experiment with new ideas and concepts. Exert upward influence in the organization. Influence decisions made at higher levels.	1 – *Almost never* to 7 – *Almost always*
Rational Goal leadership behaviour (Cronbach's α = 0.74): See that my unit delivers on stated goals. Get my unit to meet expectations on goals. Make my unit's role very clear to employees/colleagues. Clarify my unit's priorities and direction to employees/colleagues.	1 – *Almost never* to 7 – *Almost always*
Internal Process leadership behaviour (Cronbach's α = 0.83): Anticipate workflow problems, avoid crisis. Bring a sense of structure into my unit. Maintain tight control of processes. Check records, reports, and so on to see how my unit is doing.	1 – *Almost never* to 7 – *Almost always*
Human Relations leadership behaviour (Cronbach's α = 0.75): Surface differences of opinion among group members and bring them to the table for discussion. Encourage participative decision making in my unit. Show empathy and concern in dealing with employees/colleagues. Take personal needs of employees/colleagues into account.	1 – *Almost never* to 7 – *Almost always*
Bureaucratic structure	
Centralization – van der Voet (2014); Aiken and Hage (1968); Pandey and Wright (2006)	
Before I can make a final decision, permission of a superior is required.	0 – *Permission never required* to 10 – *Permission always required*
Formalization – Walker and Brewer (2008)	
Written rules and guidelines are important in guiding how I act within my organization.	0 – *Not important at all* to 10 – *Very important*

Table C1. Survey measures *(continued)*

Distribution hierarchical competences and responsibilities – Stazyk and Goerdel (2011)	
Within my organization, competences and responsibilities are clearly distributed.	0 – *Not at all clearly distributed* to 10 – *Very clearly distributed*
Environmental complexity – van der Voet et al. (2016); Volberda and van Bruggen (1997) (Cronbach's α = 0.80)	
In making decisions, a lot of environmental factors should be taken into account.	1 – *Completely disagree* to 5 – *Completely agree*
In the environment of my organizational unit, developments are taking place which stem from all kind of directions.	
In the environment of my organizational unit, everything is related to everything.	
A decision in our environment influences a large number of factors in my organizational unit.	

Appendix D. Operationalization: Survey measures

Table D1. Survey measures

Leadership behaviour – Denison et al. (1995)	
Open Systems leadership behaviour (Cronbach's α = 0.85)	
Come up with inventive ideas. Experiment with new ideas and concepts. Exert upward influence in the organization. Influence decisions made at higher levels.	1 – *Almost never* to 7 – *Almost always*
Rational Goal leadership behaviour (Cronbach's α = 0.74)	
See that my unit delivers on stated goals. Get my unit to meet expectations on goals. Make my unit's role very clear to colleagues. Clarify my unit's priorities and direction to colleagues.	1 – *Almost never* to 7 – *Almost always*
Internal Process leadership behaviour (Cronbach's α = 0.82)	
Anticipate workflow problems, avoid crisis. Bring a sense of structure into my unit. Maintain tight control of processes. Check records, reports, and so on to see how my unit is doing.	1 – *Almost never* to 7 – *Almost always*
Human Relations leadership behaviour (Cronbach's α = 0.73)	
Surface differences of opinion among group members and bring them to the table for discussion. Encourage participative decision making in my unit. Show empathy and concern in dealing with colleagues. Take personal needs of colleagues into account.	1 – *Almost never* to 7 – *Almost always*
Leadership identity centrality – Grøn et al. (2020)	
The question below concerns the role that you identify with most in your work. We distinguish between the substantive occupational identity (such as police officer, doctor, researcher, policy advisor) and leadership identity. Could you indicate which identity is most important to you in your work?	0 – *Complete identification with occupational identity* to 5 – *Both are equally important* to 10 – *Complete identification with leadership identity*

Dutch summary

Nederlandse samenvatting

Leiderschap in publieke organisaties: manoeuvreren in een uitdagende context

Leiderschap in de publieke sector kent nieuwe uitdagingen die verband houden met ontwikkelingen in de inrichting van organisaties. Om maatschappelijke opgaven aan te pakken wordt veel beleid in samenwerkingen over de grenzen van organisatie heen vormgegeven en uitgevoerd. Hierdoor zien we een gelaagdheid van structuren binnen publieke organisaties, boven op de hiërarchie van de bureaucratische organisatievorm. Als gevolg hiervan verdwijnt de vanzelfsprekendheid dat leiderschap is voorbehouden aan hiërarchische managers en ontstaan nieuwe uitdagingen om leiderschap vorm te geven. Daarbij komt dat publieke organisaties vaak te maken hebben met onduidelijke of tegenstrijdige doelen, meerdere taken en stakeholders met uiteenlopende belangen. Tezamen creëert dit voor publieke leiders een ambigue context, waarin niet altijd vanzelfsprekend is wat nodig is en hoe zij moeten handelen. Hier een weg in vinden is een uitdaging die niet zelden inhoudt dat leiders allerlei acties ondernemen.

Om aan te sluiten bij deze dagelijkse praktijk van leiderschapsgedrag introduceert dit proefschrift een breed perspectief op leiderschap: leiderschap als repertoire van gedragingen. Dit perspectief ziet leiderschap als een palet dat bestaat uit diverse gedragstypen die in relatie tot stakeholders op allerlei plekken binnen en buiten de organisatie kunnen worden ingezet. Het repertoire omvat dus een scala aan gedragsopties die op talloze manieren kunnen worden gecombineerd. Deze verscheidenheid aan mogelijkheden is nuttig om op uiteenlopende vraagstukken en situaties in te spelen; een breed repertoire aan leiderschapsgedragingen helpt leiders hierbij. Dit proefschrift beschrijft hoe leiderschapsgedrag er als repertoire uit kan zien en verklaart hoe medewerkers met en zonder leidinggevende positie in publieke organisaties dat repertoire gebruiken. Aan de hand van vier empirische studies geeft dit proefschrift antwoord op de centrale onderzoeksvraag: *Hoe krijgen repertoires van leiderschapsgedrag vorm in publieke organisaties?*

Leiderschap als gedragsrepertoire

Eerst wordt het idee van leiderschap als gedragsrepertoire uitgewerkt in Hoofdstuk 2. Hiervoor heb ik een verkennende studie uitgevoerd binnen de universitaire sector. Universiteiten hebben bij uitstek te maken met de ambiguïteit die kenmerkend is voor publieke organisaties en bieden als typische casus daarom een geschikte setting om het gebruik van repertoires van leiderschapsgedrag te verkennen. Op basis van 19 semigestructureerde interviews met bestuurders van faculteiten, departementen, programma's en groepen is geanalyseerd hoe repertoires eruitzien en ingezet worden. Hierbij onderscheid ik minder en meer complexe combinaties van verschillende soorten leiderschapsgedrag gericht op uiteenlopende belanghebbenden die zich hoger, lager of op hetzelfde niveau in de organisatie of juist buiten de organisatie bevinden. Leiders lijken per situatie te bepalen welke aanpak passend is: uit hun verhalen blijken afwisselende combinaties van gedragstypen en richtingen. Deze studie laat zien dat leiders niet alleen onderling van elkaar verschillen in het leiderschapsgedrag dat zij tonen, maar ook dat zij zelf op verschillende momenten anders handelen. Deze bevindingen bevestigen dat het repertoire-perspectief recht doet aan de dagelijkse praktijk van leiderschap in publieke organisaties. Door inzichten uit afzonderlijke stromingen in de literatuur over leiderschap in de publieke sector bij elkaar te brengen, toont een overkoepelende blik ook de samenhang tussen verschillende gedragsopties. Dit bredere perspectief biedt daarom nieuwe kansen om leiderschap volledi ger in beeld te brengen en beter te begrijpen en duiden.

Leiderschapsgedrag varieert van situatie tot situatie

Deze inzichten vormden de basis voor drie vervolgstudies waarin verschillende verklaringen voor het gebruik van repertoires van leiderschapsgedrag getoetst zijn. In Hoofdstuk 3 wordt op situationeel niveau onderzocht of de combinatie van eisen die aan leiders gesteld worden, van invloed is op hun gedrag. Daarbij is ook het effect van formele autoriteit bestudeerd. Deze studie heeft de vorm van een vignettenexperiment, dat in een interview setting met 30 universitaire bestuurders is uitgevoerd. Iedere deelnemer kreeg een set van 8 scenario's voorgelegd, waarin de gestelde eisen en beschikbare bevoegdheden gecontroleerd varieerden. Bij elk scenario werd gevraagd wat de deelnemers in de omschreven situatie zouden

doen en wie zij daarbij zouden betrekken. Omdat de scenario's gebaseerd zijn op de verhalen van deelnemers aan de eerdere interviewstudie, waren de situaties actueel en herkenbaar voor de deelnemers. Hierdoor kent dit experiment een hoog realiteitsgehalte en zijn de conclusies relevant voor theorie en praktijk.

Uit dit onderzoek blijkt dat leiders hun gedragsrepertoire per situatie anders hanteren: wanneer er gelijksoortige eisen worden gesteld, neemt het aantal verschillende gedragingen toe, terwijl een smaller repertoire wordt aangewend wanneer de eisen meer uiteenlopen (er spelen dan zowel korte- als langetermijndoelen, zowel belangen van de organisatie als van individuele medewerkers). Zoals verwacht stemmen leiders hun leiderschapsgedrag af op de omstandigheden waarin zij zich bevinden, maar op een andere manier dan de theorie voorspelde. Ter duiding van de statistische analyse kan uit de interviews worden afgeleid dat leiders hun aanpak baseren op een inschatting van urgentie en noodzaak: als een eis op korte termijn moet worden gerealiseerd en het organisatiebelang raakt, kan het niet anders dan hiermee aan de slag te gaan. Als er tegelijkertijd meerdere van dat soort eisen op een leider af komen, wordt gebruik gemaakt van meer soorten leiderschapsgedrag om alle ballen in de lucht te houden. Wanneer er echter minder haast is en/of het organisatiebelang komt erdoor onder druk te staan (er staan dan andersoortige ambities tegelijk op het spel), zal een leider eerder geneigd zijn zich op dat moment niet teveel bezig te houden met zo'n eis. Dit kan betekenen dat het gedrag beperkt wordt tot wat noodzakelijk is en zullen minder verschillende soorten leiderschapsgedrag aan de dag gelegd worden. Verder blijkt uit deze studie dat meer formele bevoegdheden de weg lijken vrij te maken om meer soorten gedrag in te zetten. Hoe het repertoire ingezet wordt, hangt dus af van de specifieke situatie en de mogelijkheden die een functie biedt.

Kansen en barrières in de organisatiecontext voor leiderschapsgedrag

De studie in Hoofdstuk 4 bouwt voort op deze bevindingen. Door de eerdergenoemde gelaagdheid in organisatiestructuren is leiderschap niet langer vanzelfsprekend voorbehouden aan mensen in formele leidinggevende posities. Bureaucratische structuren bieden minder houvast wanneer samenwerking over grenzen heen de hiërarchie doorkruist of zich eraan onttrekt. Door de leemte die zo kan ontstaan, wordt er een extra beroep gedaan op het gedrag van organisatieleden

om een gecoördineerde aanpak te realiseren. Ook van medewerkers zonder leidinggevende functie zal daardoor vaker een bijdrage aan leiderschap verwacht worden. Om te begrijpen onder welke omstandigheden een bredere schare organisatieleden leiderschapsgedrag zal laten zien, heb ik onderzocht in welke mate de organisatiecontext, in het bijzonder de bureaucratische structuur en omgevingscomplexiteit, samenhangt met gebruik van de verschillende typen leiderschapsgedrag. Hiervoor is een vragenlijst uitgezet onder medewerkers met en zonder leidinggevende functie in vier verschillende publieke sectoren: wederom universiteiten, universitair medische centra (UMC's), gemeenten en politie.

De analyses laten zien dat leidinggevenden met een formele leiderschapspositie de verschillende soorten leiderschapsgedrag uit het repertoire vaker vertonen dan medewerkers zonder zulke posities. Beide groepen maken vaker gebruik van alle soorten leiderschapsgedrag wanneer zij de omgeving van hun organisatie als complexer ervaren. De relatie tussen het gebruik van het repertoire en bureaucratische structuren is minder eenduidig. Medewerkers houden zich relatief minder vaak bezig met gedrag gericht op verandering en netwerken dan leidinggevenden wanneer zij meer formalisatie ervaren in hun organisatie. Leidinggevenden gaan verhoudingsgewijs meer gedrag gericht op interne processen vertonen dan medewerkers wanneer zij meer formalisatie ervaren in hun organisatie. Tot slot lijken leidinggevenden vaker en medewerkers minder vaak mens- en relatiegericht leiderschapsgedrag te tonen als zij menen dat bevoegdheden en verantwoordelijkheden duidelijker verdeeld zijn. Deze verbanden zijn echter zwak. Er kan voorzichtig geconcludeerd worden dat leidinggevenden in publieke organisaties meer ruimte hebben om leiderschapsgedrag te vertonen, terwijl de bureaucratie dergelijk gedrag van medewerkers kan ontmoedigen. Tegelijkertijd kan de omgeving een grotere vraag naar leiderschapsgedrag creëren. Hoewel de bevinding uit Hoofdstuk 3 dat formele autoriteit meer mogelijkheden biedt om het repertoire van leiderschapsgedraging breed in te zetten bevestigd wordt, vormen de resultaten in dit hoofdstuk ook een indicatie dat medewerkers zonder formele leiderschapspositie een substantiële bijdrage kunnen leveren aan leiderschap.

Leiderschapsgedrag als gevolg van identificatie met een leiderschapsrol

In Hoofdstuk 5 wordt verder op deze laatste groep ingezoomd. Hoewel er steeds meer aandacht komt voor de mogelijk toegevoegde waarde van medewerkers zonder leidinggevende positie in het vormgeven van leiderschap in publieke organisaties, zien we dat nog niet terug in onderzoek. Studies naar leiderschap richten zich bijna uitsluitend op leiderschap door formele managers. Om meer te weten te komen over bredere participatie in leiderschap is ook onderzoek onder medewerkers nodig. Hierbij lijkt identificatie met een leiderschapsrol een relevant aanknopingspunt. Uit eerder onderzoek is bekend dat er een positief verband bestaat tussen jezelf als leider zien en leiderschapsgedrag tonen. Omdat aan niet-leidinggevenden vaak geen nadrukkelijke verwachtingen worden gesteld op het vlak van leiderschap, is het te verwachten dat zij zowel door anderen als door zichzelf niet in een leiderschapsrol gezien worden. Tegelijkertijd kan juist het ontbreken van die formele rolverwachtingen ervoor zorgen dat identificatie met een leiderschapsrol een voorwaarde is om je met leiderschapsgedrag bezig te houden: als het niet bij je baan hoort, moet je mogelijk meer hobbels over om het wel te doen. Deze studie gaat hierop in. De analyses in dit hoofdstuk zijn gedaan op basis van dezelfde dataset als in Hoofdstuk 4; in Hoofdstuk 5 zijn echter alleen respondenten zonder leidinggevende functie in de analyse meegenomen.

Uit de analyse blijkt dat deze medewerkers zich vooral met hun beroepsidentiteit (bijvoorbeeld politieagent, onderzoeker, of arts) verbonden voelen, maar dat zij zich ook met een leiderschapsrol kunnen identificeren. Medewerkers die zich sterker met een leiderschapsrol identificeren, maken frequenter gebruik van alle soorten leiderschapsgedrag uit het repertoire. Die identificatie lijkt voor een deel te verklaren door het aantal jaar managementervaring dat niet-leidinggevenden in vorige functies hebben opgedaan: voor medewerkers met meer ervaring als leidinggevende in het verleden verschuift de balans tussen hun beroepsidentiteit en leiderschapsidentiteit meer naar de laatste. In hun eerdere functies werden er waarschijnlijk wel verwachtingen op het gebied van leiderschap aan hen gesteld; het gedrag dat zij zich toen eigen gemaakt hebben en de identificatie met een leiderschapsrol die zij toen ontwikkeld hebben, werken mogelijk ook later nog door. Op basis van de bevindingen kan geconcludeerd worden dat leiderschapsidentiteit niet volledig samenvalt met formele leidinggevende functies in de organisatiehiërarchie. Bovenal blijkt dat die identificatie samenhangt met

de inzet van leiderschapsgedrag, ook van niet-leidinggevenden. Dit biedt nieuwe aanknopingspunten om leiderschap als gezamenlijke verantwoordelijkheid in publieke organisaties te bestuderen en te ontwikkelen.

Repertoires van leiderschapsgedrag: een breder perspectief op leiderschap

Dit proefschrift laat zien dat leiderschap uit meer bestaat dan miveren van ondergeschikten; de focus waartoe het gros van de studies naar leiderschapsgedrag in publieke organisaties zich beperkt. Wanneer we leiderschap zien als gedragsrepertoire dat bestaat uit diverse gedragstypen die in verschillende richtingen ingezet kunnen worden, krijgen we een completer inzicht in de dagelijkse praktijk van leiderschap. De mogelijke combinaties zijn talloos; er geldt geen vast recept. Uit het onderzoek gepresenteerd in dit proefschrift blijkt dat leiders hun gedragsrepertoires op verschillende manieren inzetten, afhankelijk van de context waarin ze zich bevinden. Dat geldt zowel op situationeel niveau met andere eisen die aan hen gesteld worden, als op het niveau van de organisatieomgeving. Een belangrijk onderscheid in het gedrag hangt samen met formele autoriteit en positie: leidinggevenden die besluiten mogen nemen over bijvoorbeeld personeel en middelen zetten hun repertoire breder in en gebruiken de verschillende soorten leiderschapsgedrag vaker dan medewerkers zonder een leidinggevende positie. Dit verschil lijkt te worden versterkt wanneer de organisatie als bureaucratischer wordt gezien. Dit laat zien dat structuren de kansen om leiderschapsgedrag te tonen beïnvloeden. Toch vertonen ook niet-leidinggevenden niet te verwaarlozen leiderschapsgedrag. Dat leiderschap niet volledig verbonden is aan managementposities blijkt ook uit de bevinding dat deze groep zich met een leiderschapsrol kan identificeren. Eerdere ervaring als leidinggevende lijkt hier een bijdrage aan te leveren. Degenen die zich meer met een leiderschapsrol identificeren, zijn bovendien actiever in het gebruik van leiderschapsgedrag. Hoewel formele positie van invloed is, spelen dus ook individuele ervaringen en houding een rol.

Voor het wetenschappelijk onderzoek naar leiderschap in publieke organisaties biedt het repertoire-perspectief in dit proefschrift bouwstenen om leiderschap als complex en veelomvattend fenomeen in beeld te krijgen. Voor de conceptualisatie van leiderschap als gedragsrepertoire heb ik elementen ontleend aan verschillende onderzoekstradities in de literatuur over leiderschap in publieke organisaties.

Het bijeenbrengen van deze inzichten biedt een bredere blik op leiderschap dan doorgaans in publiek management onderzoek gehanteerd wordt. Door de variatie aan gedragsopties te onderkennen en meer naar soorten gedrag in samenhang te kijken, kunnen nieuwe vragen beantwoord worden die aansluiten bij hedendaagse uitdagingen in publieke organisaties. In vervolgonderzoek liggen kansen om ook gedrag over de grenzen van organisaties een plaats te geven in het repertoire. Ook benadrukt dit proefschrift het belang om te verbreden wie er bestudeerd worden als het gaat over leiderschap: medewerkers zonder leidinggevende positie spelen een belangrijke rol. Daarnaast kunnen we veel leren door naar dynamieken en processen op het niveau van groepen en organisaties te kijken. Tot slot laat dit proefschrift de mogelijkheden van analytische en methodologische variatie zien: de combinatie van methoden, maar ook de complementariteit van 'within-person' en cross-sectionele analyses zijn van waarde om verschillende soorten vraagstukken te bestuderen.

Voor de praktijk onderstreept dit onderzoek dat posities en formele bevoegdheden er nog steeds toe doen. Voor organisaties waarin veel over grenzen heen samengewerkt wordt of die ambities hebben om medewerkers een grotere rol in leiderschap te geven is het dus van belang dat er realistisch nagedacht wordt over de voorwaarden waaronder dat kansrijk is. Wie moet wat kunnen doen en van wie verwachten we wat? Wat hebben verschillende organisatieleden daarvoor nodig en wanneer zullen ze leiderschapsgedrag vertonen? Met elkaar in gesprek blijven en leiderschapsontwikkeling hierop inrichten kunnen samenwerking en dergelijke ambities ondersteunen. Voor professionals in de publieke sector – met en zonder leidinggevende functies – biedt dit onderzoek aanknopingspunten om op hun eigen gedrag te reflecteren. Door bezig te zijn met de vraag wanneer ze welke soorten leiderschapsgedrag inzetten, kunnen zij mogelijk kansen identificeren om hun repertoire anders in te zetten of verder te ontwikkelen.

About the author

Marieke van der Hoek obtained a gymnasium diploma at Maerlant College Brielle in 2010. She completed the first year in Communication and Media Studies at Erasmus University Rotterdam, but went on to study Public Administration. In these years, Marieke also participated in the Honours Programme at the Erasmus School of Social and Behavioural Sciences (2012-2014). In 2013, she studied in Ireland during an Erasmus Exchange semester at the University of Limerick and in 2014, she completed an internship at Project Blankenburgverbinding at Rijkswaterstaat. In 2014, Marieke obtained her Bachelor diploma cum laude. In 2016, she graduated at the two-year Research Master in Public Administration and Organizational Science at Utrecht University. From 2013 until graduation in 2016, Marieke worked as a research assistant at the Department of Public Administration (Erasmus University Rotterdam), where she was involved in various research projects on teamwork, performance management, Human Resource Management, and research methods.

In 2016, Marieke joined Leiden University as a PhD candidate at the Institute of Public Administration. Her research focuses on organizational behaviour and management in public organizations, in particular leadership of managers and non-managerial employees. She presented her work at various international and national research conferences (annual conferences of the European Group of Public Administration, the Public Management Research Association, the International Research Society for Public Management, and the Netherlands Institute of Government). Her work is published in international peer-reviewed journals and in edited books. In 2018, Marieke was part of the editorial board of *Publiek Management*.

Marieke chaired the PhD Seminar series at the Institute of Public Administration from 2019 to 2020. She served as a reviewer for international peer-reviewed journals and was involved in data management of the Institute of Public Administration. Marieke completed various summer and winter schools in methods and techniques organized by the European Consortium for Political Research and by Utrecht University. Besides her research, she obtained her University Teaching Qualification (BKO). Marieke taught and coordinated courses on public management, organizational behaviour, and research methods for students at bachelor, pre-master, and master level in Dutch and English. In addition, she supervised bachelor and master students writing their theses on leadership in public organizations.

As of December 2023, Marieke works as a researcher at the Netherlands Court of Audit (Algemene Rekenkamer).