The value of boundary spanners for (inter-)organizational performance: a systematic review on activities, antecedents and outcomes

Ingmar van Meerkerk* and Jurian Edelenbos

Paper for the IRSPM conference 2018, Edinburgh

Panel: Management and organizational performance in comparative perspective

Abstract

Boundary spanning is considered to be a core activity of today’s public management. According to the literature, boundary spanners are of vital importance for enhancing (inter-)organizational performance and innovation, for establishing inter-organizational collaboration and for dealing with complex cross-boundary issues. The concept of boundary spanning has its roots in organizational literature and is increasingly used in public administration. However, we lack a comprehensive overview, interdisciplinary assessment, and conceptualisation of boundary spanning activities (BSA), their antecedents and impact. We therefore conducted a systematic literature review based on the PRISMA approach (Moher et al., 2009), using the search terms ‘boundary spanning’ and ‘boundary spanners’ in study title and/or abstract. This resulted in an analysis of 249 empirical articles reporting on boundary spanners, their activities, antecedents and/or outcomes. Literature in various fields are included in this analysis. In this way the public administration literature on boundary spanning is enhanced by a.o. incorporating the insights from business administration, marketing and organizational psychology on boundary spanning. The first contribution of this paper is theoretical: conceptualizing different BSA and providing a comprehensive definition. Furthermore, given the fragmented field on antecedents and outcomes of BSA, our second contribution is to provide an overview of different types of antecedents reported in the literature as well as various outcomes of BSA. We conclude our paper with a theoretical framework and research agenda for next steps in investigating which antecedents are impacting on BSA and in turn influence (inter-)organizational outcomes.

Key words: boundary spanner, systematic literature review, outcomes, antecedents, interdisciplinary assessment

*Corresponding author

Dr. Ingmar van Meerkerk
Assistant Professor Department of Public Administration and Sociology
Erasmus School of Social and Behavioural Sciences
Erasmus University Rotterdam
The Netherlands
E: vanmeerkerk@essb.eur.nl
1. Introduction

In the field of public management and governance we see an increasing interest in boundary spanning behavior, strategies and challenges. This is not surprising given the increasingly emphasized paradigm of cross-boundary collaboration (e.g. Ansell and Gash, 2008; Kelman, 2007; O’Flynn, 2009; Osborne, 2006). Interdependencies among various state and non-state actors, the complex nature of public issues, and issues of fragmentation and coordination are amongst the key drivers for a rising attention for boundary spanners and their work (O’Flynn et al, 2014; Van Meerkerk, 2014; Williams, 2012). The challenge of coordination and collaboration across boundaries have probably always been part of public sector organizations, however due to a changing role of government and a changing context of governing, this challenge has become even more prominent (Edelenbos and Van Meerkerk, 2016; Klijn and Koppenjan, 2016; Torfing et al. 2012; O’Flynn et al., 2014). Furthermore, we are witnessing a tremendous rise in initiatives of co-production and delivery of public services, in which public servants are increasingly expected to work with citizens in ways that cut across vertical service demarcations and organizational boundaries (Voorberg et al., 2015). In various fields of public policy-making and service delivery coordination and collaboration across traditional organizational, sectoral and/or policy boundaries is stressed in order to design and deliver more effective and integrative public services (O’Flynn et al, 2014; Quick and Feldman, 2014; Williams, 2012). For example, in the field of health care, delivering support for families in deprivation or addressing the health, care and housing needs of people with conditions such as diabetes and dementia requires cross-boundary interaction of various government agencies (e.g. Needham et al., 2017). Moreover, increasing demands for user-oriented models of service delivery requires new ways of working between various agencies and with citizens to address outcomes that cut across conventional service demarcations.

Given these different developments, boundary spanning is considered to be a core activity of today’s public governance (e.g. McGuire, 2006; O’Flynn et al., 2014; Torfing et al., 2012; Quick and Feldman, 2014). Boundary spanners undertake the cross-boundary work that is needed to develop coordination and collaboration across boundaries. Their role is therefore considered to be of significant importance in relation to enhancing cross-boundary collaboration, organizational and collaborative innovation and inter-organizational performance. Moreover, as the push for more cross-boundary collaboration and cooperation in public governance has become stronger than ever before the role and work of boundary spanners grows in significance. This is also reflected by the rise in publications on boundary spanning/spanners. For example, a simple search in the data base Scopus shows a rise in publications, not only in public administration literature, especially in the last 10-15 years, which make use of the concept: 13 publications using the term ‘boundary spanning’ or ‘boundary spanner’ in title/abstract/key words in 2000, 48 publications in 2006, 89 publications in 2010 and 150 publications in 2016.

While boundary spanning is widely acknowledged in the literature as an important coping mechanism to deal with cross-boundary interdependencies, increased experienced fragmentation and increasing demands for cross-boundary public value creation, the public administration field lacks a comprehensive view on boundary spanners (Van Meerkerk and Edelenbos, 2018; Williams, 2012). First, the various research on boundary spanning work is fragmented. It is a rising concept in different disciplines, but this also seems to hamper a systematic accumulation of knowledge on the subject. As Williams (2012: 146) put it: “The accumulated body of research on boundary spanners is not extensive, and in the absence of a greater depth and breadth of understanding boundary spanners in different contexts and challenges, with researchers sharing common understandings of the notion, achieving consensus will be difficult” [italics added]. This is also stressed by O’Flynn et al. (2014) in their book on crossing boundaries in public management and policy, who conclude that (p. 303): “An important area for future attention is bridging disciplinary differences. […] Those looking to boundary crossing activity exclusively from the political science, organization studies, or public management perspectives will miss key parts of the puzzle. […] There are important insights to be
gained from across a range of disciplines, and scholars in particular may find that engaging with these different areas provides ways to move the field forward.” This calls for an interdisciplinary approach and assessment of boundary spanning work.

Second, there is quite some ambiguity in the literature in the conceptualization and measurement of boundary spanners (cf. Tushman and Scanlan, 1981; Levina and Vaast, 2005). In some literature boundary spanning is operationalized by organizational function or formal job description (e.g. the sales person or front-line employee as boundary spanner (e.g. Parasuraman et al., 1985; Ferguson et al., 2005), while other literature operationalize boundary spanning at the activity level, focusing on specific types of actions and behaviors (e.g. Birkinshaw et al., 2017; Levina and Vaast, 2005; Van Meerkerk and Edelenbos, 2014) which are or can be conducted by employees at different levels in the organizational hierarchy. Providing comprehensive overview on different types of boundary spanning activities (BSA from now on) and coming to a more specific definition helps in reducing conceptual ambiguity.

Third, we lack comprehensive understanding and cross-disciplinary assessment of the factors that influence the work of boundary spanners. These antecedents of boundary spanning behaviour can be found on different levels: on the individual level like experience and social-emotional competences of the boundary spanner (Au and Fukuda, 2002; Williams, 2002), on the organizational level, such as executive and organizational support (Annett and Wittmann, 2014; Van Meerkerk and Edelenbos, 2017) and on the network level (the organizational environment), e.g. the level of inter-organizational interdependency (e.g. Fennell and Alexander, 1987). In this article we bring together the insights developed in different disciplines to develop categories of antecedents and to report on the findings so far in relation to their effects on boundary spanning behaviour.

Finally, we lack systematic insight in what the impact of the work by boundary spanners is. Do we actually really need boundary spanners in developing trust (Kapucu, 2006), establishing cooperation (Curnin and Owen, 2014), realizing innovation (Goodyear and Casey, 2015), and increasing (inter-)organizational performance (Sleep et al., 2015)? In this article we therefore also integrate findings on different types of effects found in the various literature on boundary spanners.

In sum, we aim to contribute to a more systematic accumulation of knowledge on the activities of boundary spanners, the antecedents of boundary spanning work and the impact of boundary spanners by bringing together various strands of literature, providing overview and to bring the research on boundary spanning in public management and governance forward. Furthermore, given the fragmented field on boundary spanning, our second contribution is to develop a theoretical framework in which the various findings on activities, antecedents and outcomes are synthesized. We conclude our paper by discussing a research agenda on the study of boundary spanning for the field of public administration.

To achieve these aims we include the knowledge of various disciplines on boundary spanning, such as developed in business administration and management, organizational psychology and public management and governance. In this respect we build on a systematic literature review of 249 articles on boundary spanners we conducted in 2016 and 2017 (see next section). Next to this extensive set of articles we build on several books treating the role and activities of boundary spanners or boundary spanning work (e.g. O’Flynn et al., 2014; Williams, 2012). Furthermore, we build on our own quantitative and qualitative research on boundary spanners (e.g. Van Meerkerk and Edelenbos, 2014, 2016, 2017; Edelenbos et al., 2016).

2. Research strategy

In order to get a comprehensive overview and broad range of studies on boundary spanners, we conducted a systematic review using the PRISMA approach, the most commonly used set of
guidelines for reporting literature reviews and meta-analyses (Moher et al., 2009). Following these steps enabled us to systematically search and screen potential relevant publications.

We searched the databases Scopus and Web of Science using the terms “boundary spanner” and “boundary spanning” (last search in March 2016). This resulted in nearly 2000 hits (1880). For selecting relevant publications we applied the following key inclusion criteria:

- Empirical studies (as we are interested in reported antecedent and outcomes of boundary spanning behavior);
- Studies should focus on boundary spanners, specific individuals crossing organizational or institutional boundaries (see also section 3). This excludes studies which focus on boundary spanning organizations;
- Studies should be published in English and in peer-reviewed journals.

After screening the abstracts, applying the inclusion criteria and excluding duplicates the set was reduced to 588 articles. After full text screening, the final set came down to 249 articles.

An important next step was to code the articles on various themes: definition and conceptualization of boundary spanning, context of boundary spanning and background of boundary spanners (e.g. public, private, societal organization), methodological approach (study design), reported antecedents and effects of boundary spanning. During this coding process the coding team had regular meetings discussing the reliability of our coding. After the coding process on the themes, we inductively categorized different types of antecedents and outcomes (see section 4 and 5). This was an iterative process and during this process the two authors had several meetings in discussing these categorizations.

**Overview results with regard to background and types of studies**

The studies included in our systematic review show a good balance between qualitative and quantitative research designs: 46% of the articles use quantitative methodologies, whereas 47% use qualitative methodologies (see table 1). The quantitative studies by far used surveys to measure boundary spanning and effects or antecedents and only a few used an experiments (N = 4) or social network analysis (N = 3). Mixed method research designs were far less present (7%). The later also included a few studies using social network analysis (N = 5).

**Table 1 Research designs of included studies**

<table>
<thead>
<tr>
<th>Study design</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative design</td>
<td>118 (47)</td>
</tr>
<tr>
<td>Quantitative design</td>
<td>114 (46)</td>
</tr>
<tr>
<td>Mixed method design</td>
<td>17 (7)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>249 (100)</strong></td>
</tr>
</tbody>
</table>

**3. Defining boundary spanners and discussing different types of BSA**

As addressed in the introduction, there is quite some ambiguity in the field on boundary spanners about who boundary spanners are and what they do. Different conceptualisations and operationalizations are used in the various literature, influenced by different theoretical perspectives and contexts of research. At least three strands of literature can be detected in the literature, each accentuating and adding specific BSA (Van Meerkerk and Edelenbos, 2018).
First, boundary spanning theory has its origin in organizational studies using an open system and contingency approach on organizations (Thompson, 1967; Leifer and Delbecq, 1978). Especially the later, stresses the need of adapting the organization towards the environment in order to survive and to create a good fit. In this perspective, boundary spanners are organizational members who play an important role in information processing and external representation (also influencing the environment in gaining support) (Aldrich and Herker, 1977).

Second, literature focusing on inter-organizational collaboration, both within the context of private-private partnerships, public-private partnerships or more complex governance networks have adopted and adapted the concept of boundary spanning (e.g. Williams, 2002; Ferguson et al., 2005; Haytko, 2004). By far, most of these studies depart from resource dependency theories, which depict that organizations are strongly dependent on the resources and support of other organizations in realizing their goals (Baker, 2008). This implies that they have to establish links with other organizations. In this perspective, boundary spanners play a key role in the creation and maintenance of successful inter-organizational relations in order to manage interdependency.

Third, social-psychologists have also contributed to theory development on boundary spanning by using role theory (Adams, 1976; Perry and Angle, 1979; Johnson and Duxbury, 2010). This has drawn attention towards role conflicts and role ambiguities faced by boundary spanners and how organizations and boundary spanning individuals cope with these role stressors. Role theory depicts organizations as social systems, wherein the behaviours of system members are constrained and directed by the expectations of the various constituents with whom individuals interact in performing their jobs (Kahn et al., 1964; Katz and Kahn, 1978). In the case of boundary spanners, these various constituents are located both inside and outside the organization, delivering potential role conflicts, considering the different interests of these constituencies and the role expectations imposed on boundary spanners.

Building on these various literature, we come to the following definition in order to provide more conceptual clarity. Boundary spanners are “people who pro-actively scan the organizational environment, employ activities to collect information and to gain support across organizational or institutional boundaries, disseminate information and coordinate activities between their ‘home’ organization or organizational unit and its environment, and connect processes and actors across these boundaries”.

Although this is still a quite broad definition of boundary spanners in order to capture various roles and components of boundary spanning work, different dimensions of boundary spanning are stressed in this definition which can be more or less relevant given the specific context of boundary spanning (taking the organizational position and environmental circumstances into account). It stresses four core features of boundary spanners: (1) information collection and knowledge exchange, (2) relational activities, (3) coordinating and negotiating with internal and external actors, and (4) mediation and facilitating cooperation.

First, the mediation of the information flow is explicitly mentioned in the definition above. It refers to the particular role of boundary spanners in information and knowledge exchange. As stressed in the organizational literature on boundary spanning, boundary spanners are considered to be collectors and disseminators of information (e.g. Aldrich and Herker, 1977). In this collection and transfer of information, environmental scanning and information filtration play an important role. According to Miller (2008), competent boundary spanners know where to collect information, how to attain that information and who needs to be made aware of the information, without overwhelming these others. Next to information dissemination, translating across boundaries is
considered to be an important boundary spanning activity (Tushman and Scanlan, 1981). Translation is about bringing together two worlds or domains which speak a different language and function according to different principles, routines and procedures (Carlile, 2002). This translation means transforming information in order to make effective cross-boundary linkages and thereby include sense-making and framing activities (Carlile, 2002; Birkinshaw et al., 2017; Williams, 2012).

Second, connecting actors across boundaries includes developing and maintaining actor relationships. This aspect emphasizes relational aspects of boundary spanning work. To do their boundary spanning work, they must be both knowledgeable of and credible to people on different sides of the boundary. Boundary spanners build and maintain internal and external linkages (Tushman and Scanlan, 1981). This is refers not only to formal, but also, and often stressed, informal and personal relationships (e.g. Williams, 2002; Ferguson et al., 2005; Haytko, 2004).

Third, an important part of the work of boundary spanners is to coordinate, align and negotiate with internal and external actors: within the home organization and the organizational environment (e.g. the network, partnership, customers, clients). Through coordination, aligning and negotiation, boundary spanners allow for a tighter coupling and smooth running of cross-boundary collaboration (Ancona and Caldwell, 1992; Williams, 2002).

A fourth type of activity often stressed in boundary spanning literature is mediation and facilitation of cooperation (e.g. Fennel and Alexander, 1987; Firestone and Fisler, 2002; Van Meerkerk and Edelenbos, 2014). In cross-boundary interactions, boundary spanners are confronted with different interests and identities. Developing constructive interactions or facilitating cooperation, boundary spanners often have to mediate between different interests and identities. This also has an entrepreneurial dimensions in detecting windows of opportunities and responding to mediation opportunities between actors, (policy) processes and issues (agendas) inside and outside organizational or institutional boundaries (Birkinshaw et al., 2017; Williams, 2012).

4. Antecedents of BSA

Different types of factors can impact the BSA as described in the previous section. 31% (76) of the 249 articles we reviewed empirically examine factors impacting on boundary spanning work. We identified different types of organizational, environmental and individual factors impacting on the behavior (quality and level of BSA) of boundary spanners. This also includes a subset of factors impacting on the job satisfaction of boundary spanners, dealing with different role stressors, which subsequently impact on the job performance of boundary spanners. The identified antecedents could be positioned into four distinct categories, presented in table 2 (including their frequency). There are a few studies (N = 4) that cannot clearly be positioned in these four categories. For example, organizational size. Organizational size is to some extent found to be related with boundary spanning activity. For instance, Gazley et al. (2010) found that budget size and service scope positively impact upon inter-organizational linkages of boundary spanners (as an indicator of boundary spanning activity). We will now discuss each category shortly. After discussing the effects of boundary spanning behavior in the next section, we synthesize the findings and discuss an integral research model.

4.1 Individual determinants

Most of the studies (32%) report individual level factors impacting on the quality and level of boundary spanning behavior. These include experience, social-emotional competences (empathy, communicating and listening skills), cognitive capacities (information processing skills), network ties (internal and external linkages) and motivation (e.g. Au and Fukuda, 2002; Dollinger, 1984; Giaretta,
For instance, information processing capability as a type of cognitive capacity is found to be important for boundary spanners in order to scan and process environmental information (e.g. Dollinger, 1984; Williams, 2008). In this respect, Dollinger (1984) shows that a certain type of information processing capability (i.e. integrative complexity) positively correlates with boundary spanning activity of small business entrepreneurs. This capacity refers to the extent in which individuals can process information and whether individuals can discriminate among a wide variety of stimuli, enabling boundary spanners to deal with environmental complexity.

Table 2 Types of factors impacting on boundary spanning behavior and amount of articles reporting on these factors

<table>
<thead>
<tr>
<th>Type of factor</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual determinants (competences, capacities, experience, commitment,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>motivation, linkages)</td>
<td>35</td>
<td>32%</td>
</tr>
<tr>
<td>Environmental characteristics (uncertainty, dependency, dynamics, inter-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>organizational relationships)</td>
<td>28</td>
<td>26%</td>
</tr>
<tr>
<td>Role definition and role stressors (level of autonomy, formalization, role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ambiguity, role conflict, role overload)</td>
<td>22</td>
<td>20%</td>
</tr>
<tr>
<td>Organizational support (management support, empowerment, co-workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interaction, team behavior)</td>
<td>19</td>
<td>18%</td>
</tr>
<tr>
<td>Other (e.g. organizational size, service scope)</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>108*</td>
<td>100%</td>
</tr>
</tbody>
</table>

*The total number of factors is larger than the total amount of articles discussing factors (N = 76), as some articles report on several factors

Next, specific types of social-emotional competences are found to be important. Communicating and listening skills (e.g. Weerts and Sandmann, 2008), empathy (e.g. Williams, 2002) and conflict management (e.g. Williams, 2008) are key social intelligence competences found to be important for BSA as linking with and building sustainable relationships with actors in the environment of the organization. Also, but to a lesser extent examined, emotional intelligence competences (e.g. self-monitoring, self-control, self-efficacy) are related to competent boundary spanners (Marrone et al., 2007; Williams, 2008 and Mehra and Schenkel, 2008). Mehra and Schenkel (2008) found that employees who perform many BSA significantly score higher on self-monitoring than their colleagues. High self-monitors are people who tend to be highly attuned to cues of situational appropriateness; chameleon-like (Snyder, 1979), making them very sensitive to their environment and able to adapt their behaviour and attitude.

Next to competences and experience, the network ties of boundary spanners are mentioned as another determinant for the work of boundary spanners. This specifically concerns the internal and external linkages of boundary spanners (e.g. Tushman and Scanlan, 1981a; Woisetschlager et al., 2009). For boundary spanners to become successful in information and idea collection and dissemination, they need to be connected well internally as externally as is shown by the seminal research of Tushman and Scanlan (1981a, 1981b).
4.2 Environmental characteristics

As noted in the previous section, both open system and contingency theory are important theoretical approaches in the literature on boundary spanning. These theories postulate that variations in environmental complexity and dynamics are related to boundary spanning behaviour (Thompson, 1967; Leifer and Delbecq, 1978; Aldrich and Herker, 1977; Johnson and Duxbury, 2010). Also interdependency theory, often used in public management and governance literature on boundary spanning (see Baker, 2007), stresses the relationship between environmental complexity, interdependency between organizations and boundary spanning behaviour. In this respect, quite some studies (26%) on antecedents examine environmental factors in relation to boundary spanning behaviour (Jerrel, 1984; Lazorchak & O’Neal 2001; Su et al., 2009; Callister and Wall, 2001).

Many studies examine environmental uncertainty in relation to boundary spanning behaviour. The general hypothesis, building on contingency theory, is that a high level of environmental uncertainty, for instance measured by dynamics and complexity, leads to more BSA. While some studies find no relationship (Au and Fukuda, 2002), most studies find a weak or moderate relationship in this respect (e.g. Jerrel, 1984; Lazorchak & O’Neal 2001; Lysonski et al., 1988; Van Meerkerk and Edelenbos, 2014). For instance At-Twaijri and Montanari (1987) found a weak relationship between environmental uncertainty and boundary spanning activity in the context of the electronic industry. They examined two dimensions of environmental uncertainty: dynamism (level of changing elements such as products, competition) and complexity (referring to the number of elements, such as amount of stakeholders, and their dissimilarity).

Compared to environmental uncertainty, more convincing evidence is found on the relationship between interdependency and boundary spanning behaviour. When organizations face higher levels of interdependency with other actors in their environment (or more outside influence), more BSA are conducted. This is found in different sectors, both public and private, such as health care (e.g. Fennell and Alexander, 1987; Callister and Wall, 2001), education (e.g. Addi-Raccah, 2015) and the retail industry (e.g. Su et al., 2009), and in relation to different types of boundary spanning persons working on different organizational levels. For instance, McGowan and Bozeman (1982) found that employees in different types of governmental agencies devote more time to boundary spanning activity when they perceive that outside influence or external politics is salient.

Next to environmental uncertainty and interdependency, there is a small set of studies relating inter-organizational dynamics and relational capital to the level and type of boundary spanning (e.g. Callister and Wall, 2001; McGowan and Bozeman, 1981, Hsu et al., 2014; Luo, 2006). This category focuses at a more micro level. For instance, Callister and Wall (2001) in their study on the encounters between managed care organizations and care providers found that negative past encounters between boundary spanners and care providers adversely affected the boundary spanners’ response in subsequent interactions. On the other hand, relational capital and perceived interactional justice (as positive encounters) positively impacts on the quality of boundary spanning activity (leading to more knowledge and information sharing by boundary spanners) as shown by Hsu et al. (2014) and Luo (2006).

4.3 Role definition and role stressors

A subset of antecedent literature (20%) focuses on the composition or definition of the boundary spanner’s function and role impacting on the psychological wellbeing and job performance of boundary spanners. This subset often builds on role theory (see section 3). Several research shows that people in boundary spanning positions experience a higher level of different role stressors as compared to other organizational employees (e.g. Singh, 2000; Nygaard and Dahlstrom, 2002; see also next section). Several studies examine the impact of different role stressors, i.e. role conflict,
role ambiguity and role overload, on boundary spanners’ job outcomes. Role conflict refers to perceived incompatibility among role expectations and demands (e.g., from supervisors, customers, citizens, policies) that impact on a boundary spanners’ role performance (Kahn et al., 1964; Singh, 1998). Role ambiguity occurs when an employee lacks the information needed to effectively enact his/her role and uncertainty about the expectations of different role set members. Role overload occurs when the employee perceives that the cumulative role demands exceed his or her abilities and motivation to perform a task (ibid.).

In most studies significant negative effects are found of role ambiguity and role conflict on job satisfaction, organizational commitment and/or job performance (e.g. Chebat and Kollias, 2000; Crosno et al., 2009; Rhoads et al., 1994; Singh et al., 1994; Stamper and Johlke, 2003). For example, in their study on boundary spanning employees in the retail banking and business credit industries, Bettencourt and Brown (2003) found that role conflict and ambiguity indirectly negatively impact on (different types of) boundary spanning behaviour. Both indirect effects go via their negative effects on job satisfaction and/or organizational commitment.

While role conflict is generally found to negatively impact upon job satisfaction (e.g. Lysonski and Woodside, 1989; Singh, 1998), the effect of role conflict on boundary spanning behaviour (job performance) is less clear. This may impact indirectly via boundary spanner’s job satisfaction (e.g. Bettencourt and Brown, 2003). Furthermore, the relationship between role conflict and job performance is also found to be moderated by personal characteristics of a boundary spanner. For example, Crosno et al. (2009) found that boundary spanners with an optimistic attitude are able to anticipate and respond proactively to stressors (role ambiguity, role conflict), resulting in less burnout and higher levels of job performance and satisfaction.

Regarding other aspects of organizational composition, decentralization and formalization of boundary spanning roles is not much examined. Holmes and Smart (2009) are one of the few studies which discuss the level of decentralization and formalization in boundary spanning roles in relation to innovative collaborations between corporate and non-profit organizations. In their comparative case study on eight collaborations which have resulted in innovative outcomes, they compared different levels of formalization and their impact on the quality of interaction (identifying suitable opportunities for innovation). The cases in which the boundary spanning role was more formalized and centralized had a low or moderate level of interaction, whereas the cases with a more decentralized boundary spanning role showed a higher number of organizational linkages and interaction, thereby increasing the probability of identifying suitable opportunities for innovation (Holmes and Smart, 2009).

4.4 Organizational support

Nearly a fifth of the antecedent set of studies reports on organizational support and feedback factors, referring to management feedback, empowerment, organizational/co-workers support and control of boundary spanners. This set of factors is not only related to boundary spanning behaviour (the level and quality of BSA), but also to job satisfaction, motivation and commitment of boundary spanners. A handful of studies examine the relationship between (different forms of) organizational support and boundary spanning behaviour (Arnett and Wittmann, 2014; Grawe et al., 2015; Stamper and Johlke, 2003; Qiu, 2012; Van Meerkerk and Edelenbos, 2018). In most of these studies significant positive effects are found between organizational or top-management support and boundary spanning behaviour. As boundary spanning can be a stressful activity (see section 4.3), organizational support can provide confidence and psychological assurance encouraging boundary spanning employees to engage in BSA, as for example found by Qiu (2012). From survey research among marketing managers, he founds that a supportive organisational climate (referring to providing aids to facilitating job performance and dealing with stressful situations) is positively
related to BSA. He argues that when organisations reward the increased work effort and cares about the socio-emotional needs of employees in boundary spanning functions (in this case marketing managers), they will develop an emotional obligation to the organisation’s welfare and goals.

Organizational support can also indirectly impact on boundary spanning behaviour (Grawe et al., 2015; Stamper and Johlke, 2003). For example, Stamper and Johlke (2003) found a moderating effect of organizational support in the relationship between role stressors and job satisfaction of boundary spanning employees. Organizational support reduces the negative relationship between role conflict/ambiguity and job satisfaction. In turn, job satisfaction enhances job performance of boundary spanners as is shown by other studies (e.g. Chebat and Kollias, 2000).

A specific form of organizational support which receives attention in relation to boundary spanners is empowerment. Empowerment refers to situations in which managers give employees the discretion to make day-to-day decisions about job-related activities. Empowerment of boundary spanning employees is considered to be important, as their activities, for example in managing relationships with citizens, customers or clients, require adaptability (Chebat and Kollias, 2000). In their study on the impact of empowerment on boundary spanning employees in the bank sector, Chebat and Kollias (2000) found that empowerment reduces role conflict and role ambiguity and positively impacts on self-efficacy, job satisfaction and adaptability of boundary spanners.

Next to managerial or organizational support, dynamics on the team level and the relationship with other co-workers can impact on the willingness and/or orientation of boundary spanning employees to engage in (certain types of) boundary spanning activity. Co-workers trust, team consensus and socialization opportunities are found to be positively related to boundary spanning behaviour (Arnett and Wittman, 2014; Marrone et al., 2007). For example, Marrone et al. (2007) found that the degree to which teams emphasized externally oriented activities (team’s external focus) is positively related to a team member’s boundary spanning behaviour. Teams that collectively value BSA are more likely to incorporate such activities into their team strategy, monitor these activities accordingly, and actively encourage boundary-spanning behaviours throughout the team’s period of operation.

5. Impact of BSA

The work of boundary spanners is considered important in completing tasks and realizing (inter-) organizational performance. In 37% (N = 93) of the 249 reviewed articles, different kinds of impact were empirically reported. This implies that the effects of boundary spanning is an important research theme in the wide literature on boundary spanning. Out of these 93 articles different categories of impact could be derived. From an inductive enquiry we came to five different types of impact categories as presented in table 3.

When we take a closer look at the number of times the above mentioned categories are treated in the articles, we found that relational quality is most often discussed (44 times) followed by organizational performance (30 times), impact on boundary spanner (16 times), inter-organizational outcomes (13 times), and finally integration and alignment (9 times). In some studies different categories were discussed at the same time.

5.1 Impact on personal experience and job outcomes

This category refers to how boundary spanners experience their work and which personal job outcomes are reported as a consequence of boundary spanning work. As previously mentioned, role stress is a recurring topic (Kahn et al, 1964; Miles, 1976; Singh, 1993). Several studies find that
boundary spanners experience role conflicts to such an extent that it hampers their performance and reduces their overall job satisfaction (Singh, 1993; Singh et al, 1996; Ramarjan et al, 2010). Dealing with different interests and demands from inside and outside the organization can lead to frustration and confusion (role ambiguity), ultimately leading to decreasing job satisfaction and even to burn-out (Ambrose et al., 2014). Au and Fukuda (2002) found that role ambiguity in particularly related with specific types of boundary spanning behavior: ambassadorial activities negatively impacted upon role ambiguity; whereas scouting and coordinating activities do not necessarily increase role ambiguity. The authors suggest that this may be caused due to the success of integrating external (goals) pressures and internal pressures (organizational goals).

Table 3 Types of impact of boundary spanning behavior and amount of articles reporting on them

<table>
<thead>
<tr>
<th>Impact categories</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on job outcomes of boundary spanners (job satisfaction, burnout, personal influence)</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Organizational performance (productivity, innovation)</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>Relational quality (trust, collaboration, constructive dialogue)</td>
<td>44</td>
<td>39</td>
</tr>
<tr>
<td>Inter-organizational outcomes (network performance, synergy, public value)</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Integration and alignment (internal and external)</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>112*</td>
<td>100</td>
</tr>
</tbody>
</table>

*The total score (112) is larger than the total amount of articles on boundary spanning impact (93), as some articles report on different types of impact

Some studies pay attention to positive personal outcomes. For example, Manev and Stevenson (2001) found that BSA correlate with influence, regardless of hierarchical level. Outside interactions are an important channel for obtaining important environmental information and gaining stature. Moreover, those who are more active in the extended networks tend to be more influential. The relationship between boundary-spanning orientation and influence is curvilinear as influence rises until a moderately high value of orientation, and slightly decreases for extremely high values. Those boundary spanners who manage to balance their external boundary spanning and internal contacts appear to be most influential.

5.2 Organizational performance

A lot of literature on the impact of boundary spanning is interested in how these activities improve the performance of organizations. Most often, productivity and innovation are used as indicators to measure organizational performance.

Many authors have found positively relationships between BSA and team/organizational productivity (e.g. Sleep et al, 2015; Drach-Zahavy, 2011; Sharma et al, 1999; Robertson, 1995; Rosenkopf & Nerkar, 2001). Walter (1999) and Walter and Gemunden (2000) for example show that boundary spanners have a significantly positive effect on sales growth. As hypothesized, both relationship outcomes “growth of sales within two years in the customer relationship” and “supplier’s share of the customer’s business” are significantly higher if the relationship is advanced by BSA. They also found that boundary spanners already have been acting longer within the customer relationships, meet more people on the side of the customers, and know more people on the side of the customers better than persons who are not positively committed in the business
relationships. These results indicate that more experienced boundary spanners have a stronger impact on organizational productivity.

An important subset of organizational performance studied in the boundary spanning literature is innovation. We see that various studies find a positive relationship between boundary spanning and innovativeness (e.g. Bullinger et al, 2010; Gao et al, 2008; Goodyear and Casey, 2015; Liu et al, 2015). In general, this relationship is explained by the nature and level to which knowledge from the organizational environment is collected and diffused, shared and exchanged with other members of the organization. Bullinger et al (2010) found that increase in communication fosters the development of innovative ideas, as effective communication, involving others, and providing feedback positively influenced a team’s creative performance. Persons who have ties across the boundaries of their social group have contact with a heterogeneous set of people and thus are more likely gain access to different perspectives and knowledge sources. This can initiate cognitive processes like flexible and divergent thinking and the ability to generate various alternatives (Granovetter, 1983; Kanter, 1988). This again facilitates cognitive recombination and uncommon connections and thus increases creativity and innovation (Perry-Smith, 2006).

Learning and knowledge absorption is an important mediating variable in the relationship between boundary spanning and innovation (e.g. Gao et al, 2008; Goodyear and Casey, 2015; Ben-Mehahem et al, 2013; Elbers and Maurer, 2014). Boundary spanners make it possible that (tacit) knowledge is expressed and communicated and lead to new insights and learning, which in turn foster innovative capacity. Gao et al (2008) for example indicate that external ties with the organizational environment (noted as “business ties”) play an important role in innovation for shared learning, knowledge transfer, and information exchange. Arnett and Wittman (2014) indicate in their study that especially the tacit knowledge and the expression and diffusion of this knowledge is important to enable firms to apply important knowledge in reaching organizational performance. By expressing and sharing tacit knowledge, salespeople provide personnel in other functional areas a deeper understanding of the operating environment and the customers’ demands and needs. This knowledge facilitates an external and marketplace orientation, which encourages firm innovation.

5.3 Relational quality

The next category of boundary spanning impact is about relational quality. This is the largest category and includes different subsets: the impact on trust, collaboration and partnerships, and dialogue among members of different organizations.

Various authors underline the impact of boundary spanners on the creating of (inter-personal) trust (e.g. Van Meerkerk and Edelenbos, 2014; Johnson, 2011; Niederkofler, 1991; Soderberg et al, 2013; Sharma et al, 1999). In their research on urban governance networks, Van Meerkerk and Edelenbos (2014) show that boundary spanners strongly enhance the level of trust in these networks. Frequent and recurring interaction with actors with different organizational backgrounds give the opportunity to empathize with and respect another’s’ values and perspectives (see also Steadman, 1992). As competent boundary spanners have developed a feel for otherness for what is relevant for the other side of the boundary, this enables boundary spanners to search for shared meanings and identities (Kapucu, 2006; Williams, 2002). In this way trustworthy relationships with actors from different organizational background can be developed and maintained.

Collaboration is often mentioned as part of establishing relational quality by boundary spanners (e.g. Curnin and Owen, 2014; Soderberg et al, 2013; Lindsay and Dutton, 2012). Boundary spanners are found to be important in establishing collaborations and partnerships due to their relational, communicative, mediation and informational activities (Williams, 2002). For example, Curnin and
Owen (2014) in their research on multiagency emergency management show that especially the boundary spanning roles of networking, legitimate enabler, information catalyst, organizational experts, and domain expert lead to successful collaboration in the field of emergency management. The combination of the delegated capacity to bring organizations together, to be an expert in the field (organization and domain expert) and the capacity to filter and interpret information from the environment to avoid information overload for the receiving organization (information analyst) together leads to collaborative advantages.

Next to collaboration and trust, attention is paid to the effects of boundary spanners on creating a constructive dialogue and shared understanding. In their study on common platform development, Jain and Ramesh (2015) found that BSA stimulated constructive dialogues across cultural, professional and/or social boundaries by developing boundary objects and experiences, like models, symbols and concepts that can be used as anchors in creating a shared language and common understanding which in turn can infuse communication. BSA particularly evoked informal contacts between representatives of organizations inhibiting discussions and debates. Via these informal discussions mutual and shared understandings was created.

5.4 Inter-organizational outcomes

In this category the impact of boundary spanners on inter-organizational outcomes is discussed. Recurring types of inter-organizational outcomes are: collaborative/network performance (Steadman, 1992; Van Meerkerk and Edelenbos, 2014; Arnould and Mohr, 2005; Soderberg et al, 2013), synergy (Luo, 2001; Lee, 2014; Cramm et al 2013), and public value (Morse, 2010).

Van Meerkerk and Edelenbos (2014) took a closer look on the performance of governance networks in the field of urban development projects. They found a clear and significant relationship between the presence and the work of boundary spanners on the one hand and network performance at the other hand. With their role in increasing the flow of information, and translating information across organizational boundaries, connecting individuals and processes across organizational boundaries, they found that the presence of boundary spanners contributed to the performance of governance networks.

Another type of inter-organizational outcomes in the public sector is provided by Morse (2010) with his study on public value. He finds that boundary spanners are important in creating public value across boundaries. Public value is used here as a near synonym of the common good or the public interest. It is ultimately a social construct. Public value creation may include efforts to solve or at least mitigate public problems; improve the efficiency, effectiveness, or fairness of public services; create or enhance a public service; or respond to public sentiment in some way (see also: Moore, 1995). Morse (2010) found that boundary spanners turn out to be important in playing a catalytic role in visualizing potential public value and in the creation of integrative partnerships. Boundary spanners boost interaction processes through which multiple actors with multiple interests create a common vision of, and work together to create, public value. Once boundary spanners managed to develop a common vision together with all stakeholders, they also worked through many ups and downs in the collaboration to make it happen.

5.5 Integration and alignment

The final impact category we distinguished is that of integration and alignment. In response to processes of specialization and fragmentation, boundary spanning is considered as a coping mechanism to restore coherence and integration (Edelenbos and Teisman, 2011). In general, positive effects are found of BSA in relation to integration and alignment, although these are challenging endeavors (e.g. Niederkofler, 1991; Warner et al, 2010; Schotter & Abelzaher, 2013;
Shaw et al., 2013; Du and Pan, 2013; Kristjanson et al., 2009; MacArthur, 2014). For example, Warner et al. (2010) found evidence in the field of Dutch water management that boundary spanners are important in integrating different sectors. In realizing the European Water Framework Directive, which is mainly about realizing certain levels of water quality, different fields are related and need combining and integration like agricultural interests, regional economic development, natural values, and water safety issues to complete each project. To achieve these goals, water managers are engaged in different BSA as they need to negotiate and strike alliances with actors in other policy areas such as spatial planning and local and regional economic development. Next to integrating and aligning organizations from different sectors, it is also about spanning different scales, like local, regional and national scales. These scales hold different time horizons, short term, midterm and long term planning schemes. According to Warner (2010) boundary spanners can enhance the aligning of these sectors, scales and time horizons making integrated water resources management work.

6. Synthesis and discussion: and integral framework and avenues for future research

Our interdisciplinary assessment and systematic review of boundary spanning work indicated that the literature and research on boundary spanners is diverse and spread over various disciplines; boundary spanners are treated in public management, governance, social psychology, business management and administration, and organization studies. Figure 1 presents an integrative framework in which we integrate and synthesize the findings on our systematic review. The model consist of five blocks or broad variables, which can be disaggregated into more fine-grained variables: (1) environmental and institutional context, (2) organizational context, (3) boundary spanner’s behaviour and activities, (4) boundary spanning interaction, and (5) outcomes.

6.1 Environmental and institutional context

In line with contingency theory, one of the dominating theoretical perspectives used in boundary spanning literature, the environmental and institutional context is an important block in the framework. The boundary spanner is active in an inter-organizational or multi-organizational (network) context in which private, public, and/or societal organizations are involved. This environmental and institutional context impacts on the work of the boundary spanner: his orientation, goals, options and behaviour (types/intensity of BSA). For instance, the type and level of interdependencies between organizations in the environment and (experienced) environmental uncertainty (caused by the complexity and dynamics of the particular context) impacts on the intensity and quality of boundary spanning behaviour (e.g. Fennell and Alexander, 1987; Callister and Wall, 2001; see section 4). For example, higher levels of interdependency between the organization and other actors in the environment positively affects the intensity of boundary spanning behaviour. The environmental context also consist of, what Williams (2012) calls ideational elements (based on Hay, 2002). This refers, for example, to new policy discourses (e.g. ‘joined-up governance’, ‘Big Society’), which vary widely in the context of particular policy areas. Such ideational elements play a role in influencing windows of opportunity for cross-boundary collaboration and thereby the strategic options available for boundary spanners to build new alliances or to connect certain actors, processes and agendas. Boundary spanners are influenced by such ideas, but can also strategically frame these ideas in order to mobilize support for their cross-boundary endeavours (Williams, 2002).

Environmental characteristics such as complexity and interdependency or inter-organizational conflicts are also likely to impact on boundary spanning behaviour indirectly, via their effects on role stressors (role ambiguity, role conflict or role overload). These indirect relationships via role stressors is less examined in the literature so far, especially in the public management and
governance literature. Examining the impact of environmental characteristics on experienced role stress of boundary spanners and its subsequent effect on the level and quality of their boundary spanning behaviour is a new and promising avenue for future research.

**Figure 1: Integrative and dynamic framework of BSA and behaviour**

The environmental and institutional context also impacts on the organization and may influence boundary spanner’s autonomy and role composition via the organizational level. For instance perceived environmental uncertainty or inter-organizational interdependencies by (top-)management of the boundary spanner’s home organization influences the autonomy and composition of boundary spanning functions (e.g. more or less regulated) as is shown by the research of Leifer and Delbecq (1978).

Furthermore, environmental context variables are also likely to moderate the relationship between boundary spanning behaviour and outcomes. A higher level of environmental complexity (heterogeneity and dynamics) is general assumed to make it more difficult to realize good outcomes (e.g. network performance, collaborative innovation), thereby negatively impacting on the relationship between BSA and outcomes (Verweij et al., 2013). These moderating relationships are not much examined yet in the boundary spanning literature. The case for furthering examining these moderating relationships is further strengthened by results on the influence of context on managerial effectiveness as provided by Meier et al. (2015) comparing the Danish and US context. They found that both internal and external oriented management activities in Texas schools have a larger impact on student performance than in Denmark due to environmental context differences. They argue that
in the US context principals have a greater discretion and management authority. Hence, the institutional context impacted on the effectiveness of boundary spanning work.

6.2 Organizational factors

The second block consist of the organizational factors influencing the behaviour of boundary spanners (e.g. their working environment, role stressors, autonomy, goals, and resources). The boundary spanner is part of an (public, private or societal/community) organizational context. These organizational factors can act as facilitating, but also as constraining conditions for boundary spanners (see section 4). As previously noted, organizational support is an important factor which can positively impact on the quality and level of boundary spanning work, but also on how boundary spanners are able to cope with role stressors (role ambiguity / conflict / overload). Although there are some studies on top-management support of boundary spanners, other forms of organizational support are relatively unexplored.

In this respect the model suggests several organizational characteristics which are not that much examined yet in the literature on boundary spanning, especially in the field of public administration. This holds especially for those organizational characteristics which are typical for public organizations. For instance, public organizations are often described as being relatively bureaucratic (Rainey 2014; Boyne 2002). Moreover, the degree of formalization (of the boundary spanner’s role and function) impacts on boundary spanning behaviour and boundary spanning interaction (e.g. Holmes and Smart, 2009), although this is not much examined yet in public sector organizations. Formalization of boundary spanning roles refer to the degree to which BSA are manifested in written documents regarding procedures, job descriptions, regulations and policy manuals (Hall 1996). The impact of formalization on behaviour of organizational employees and processes of adaptation are for instance shown in the literature on transformational leadership and organizational change (Van der Voet et al., 2016). The level of formalization might negatively impact BSA as red tape come into play, which might hamper the ability of boundary spanners to timely connect to others or to adaptively respond to opportunities for cross-boundary value creation (Holmes and Smart, 2009). On the other hand formalization might also imply that boundary spanners get more access to official organizational resources, which could facilitate their work, as for instance shown by Kislov et al. (2017) in their study on the impact of legitimation on the work of boundary spanners. More research is needed in order to find out how this relationship between formalization/legitimation and boundary spanning behaviour works out in practice and in different contexts.

Furthermore, performance management systems of boundary spanners are likely to be different in public sector and private sector environments, though this has become more blurred in the last decades through the influence of New Public Management reforms (Pollit and Bouckaert, 2004). Boundary spanners working in a private organization are likely to be stronger evaluated by efficiency and effectiveness indicators, whereas public sector boundary spanners are perhaps more evaluated by procedural and throughput oriented performance indicators. This is likely to have its effects on boundary spanning behaviour (type and roles). For instance, more output and efficiency incentives (profit, revenue thinking, etc.) might infuse a more practical orientation of boundary spanner in making things work and easier to explore entrepreneurial activities. In contrast, working in public organizations is likely to pose more demands on boundary spanners with regard to organizational procedures, rules and norms, which he or she has to take into account in dealing with the environment. An unexplored avenue in the boundary spanning literature concerns the relationship between performance management systems on the one hand and boundary spanner’s behaviour and effectiveness on the other hand (see for an exception the study of Dumond, 1994).
In addition, the relationship between organizational factors and role stress of boundary spanners is an interesting research subject which also needs further attention and development, especially in the field of public management and governance. We have found a clear subset of articles focusing on role stress of boundary spanners, but, as noted previously, this literature often focuses on boundary spanning role persons in general, thereby not taking actual boundary spanning behavior into account. We argue that there lies an important avenue for further research here. Public management and governance literature on boundary spanning can build on psychological research on roles stress of boundary spanners and ways to cope with role stress. This type of research can build more knowledge about the effects of certain organizational factors on boundary spanning behavior and role stressors. Furthermore, it can build more knowledge of psychological processes and different emotional states a boundary spanner goes through in implementing core activities and coping with personal challenges and role stressors.

6.3 Boundary spanning competences and activities

Individual determinants are a clear set of factors directly impacting upon the level and quality of boundary spanning behavior (see section 4). As this set of variables is attached to the boundary spanner, we have included it in the block ‘boundary spanner’s behavior’. Cognitive, social and emotional competences, such as information processing capabilities, communicating and listening skills, empathy, self-efficacy and conflict management, are key elements of individual determinants (e.g. Weerts and Sandmann, 2010; Marrone et al., 2007; Williams, 2002; Williams, 2008). While cognitive qualities and expertise (Tushman and Scanlan, 1981) and social competences (Williams, 2002) are more widely studied, less attention is paid to emotional competences of boundary spanners. Emotional competences refer to “the subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey and Mayer, 1990: 189). This might be a promising avenue for future research, as such competences seem to be highly relevant in the context of boundary spanning, as also shown by Mehra and Schenkel (2008). Self-monitoring, adaptability and reflexivity are emotional competences which are not much examined yet, but which seems to be relevant for boundary spanners in coping with role stress and environmental complexity. As boundary spanners operate in multi-organizational contexts, one has to be adaptive to the specific situation in which one operates. In the in-between worlds different languages can be spoken, various viewpoints can be dominant and distinct interests can be at stake. In addition, the boundary spanner operates in his or her own home organization, and needs to adapt and translate issues and information to the organization’s logics (language, procedures, and routines) (Smink et al., 2015).

In relation to boundary spanning activities, future research can gain from more comparative research across sectors and domains to more systematically examine differences in specific types of dominating boundary spanning activities in relation to different contexts. Furthermore, knowledge on the relationships between specific boundary spanning activities, competences and results is lacking.

6.4 Boundary spanning interaction

Next, boundary spanning interaction is depicted as a separate block in the model. This block refers to the relational dynamics between boundary spanners and their counterparts from other organizations. These relational dynamics both impact on boundary spanning behaviour and outcomes as elaborated in section 4 and 5. Furthermore, a boundary spanner may be active in a team of boundary spanners from the same organization or from different organizations (informal or
formal) who are on a joint mission and collaboratively try to connect different organizations and environments (Van Meerkerk and Edelenbos, 2018; Williams, 2012). The quality of the interaction between boundary spanners of different organizations also impacts on the work and effectiveness of the boundary spanner (Frey and Adams, 1972).

6.5 Outcomes and feedback loops

There is quite some attention to the output and outcome of boundary spanning work as discussed in section 5. From our systematic literature review we have arrived at different clusters of outcomes at the individual, organizational and inter-organizational level. We still lack understanding of how specific behaviour and activities of boundary spanners lead to certain types of outcomes. Moreover, the three categories of outcomes and related subsets also have relationships.

Lastly, the framework is dynamic as it consists of a few feedback loops. One from outcomes to boundary spanning behaviour as the outcomes can have positive (and negative) impact on the work of boundary spanners when outcomes are (not) realized. Second from outcomes to (constraining and facilitating) organizational conditions as the outcomes can have positive and negative consequences for these conditions. For example when good outcomes are realized constraining conditions can decrease and facilitating conditions and resources (e.g. organizational support might increase. These feedback-loops are not yet examined and (specifically) require longitudinal research designs.

6.6 Concluding remarks

There is an increasing need for and attention to boundary-crossing processes in the field of public management and governance. With this paper we therefore intended to provide more comprehensive understanding on boundary spanners and boundary spanning behavior. In general, boundary spanning behaviour is still mainly studied from a mono-disciplinary perspective. We argue, in line with others (Williams, 2012; O’Flynn et al., 2014), that an important avenue for future research is an interdisciplinary approach for coherently understanding boundary spanning behaviour in different organizational and environmental contexts. With the cross-disciplinary review presented in this paper, which resulted in an integrative framework, we aim to support future research in moving forward in this respect.

Particular avenues for future research have been sketched out. One important avenue is to compare different environmental contexts, e.g. different policy sectors or countries, in order to examine more carefully how these impact on the relationship between boundary spanning behaviour and outcomes. Furthermore, in the field of public management and governance there is relatively little insight in the antecedents of boundary spanning behavior. There is some research discussing individual competences (e.g. Weerts and Sandmann, 2008; Williams, 2002; 2012), but organizational and environmental factors are not much examined yet. In this respect, the field can advance its research on boundary spanning by integrating the insights from the marketing and business administration literature on organisational support and role stressors developed in organizational psychology.
References

* References included in the systematic review and cited in this article. Note that not all publications included in our review have been cited.


