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Boundary thinking in landscape architecture and boundary-spanning roles of landscape architects

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ABSTRACT

Landscape architects play important roles in addressing societal challenges. To successfully address these challenges, this essay argues that they need to expand their understanding of boundaries and engage in boundary thinking. Distinguishing between physical, mental and socially constructed boundaries, we characterise boundary thinking as a creative process and productive motive in designing landscapes. Subsequently, we present four types of boundary-spanning roles for landscape architects to perform—the subject-based designer, the visionary narrator, the process-based designer, and the design-led entrepreneur—and point to the cognitive and social capacities needed to play any of these roles. We propose for landscape architecture to consider boundary thinking in agenda setting discourses and to include boundary spanning into practice. We suggest three avenues to pursue in realising professional opportunities: exploring the roles landscape architects play, understanding the environment that enables boundary-spanning work, and developing boundary theory in landscape architectural research.

KEYWORDS

landscape architecture; boundary thinking; transforming narratives; boundary spanning; role performance; professional capacities

Introduction

Landscape architects play important roles in achieving sustainability goals and addressing societal challenges, including human health, energy transition, climate adaptation, and biodiversity challenges (e.g. Mann et al., 2018; Marin, 2017; The Landscape Institute, 2019; Zeunert, 2017). Success in addressing complex challenges depends on the ability to develop and apply integrative and inclusive approaches to landscape design, such as effective cross-disciplinary collaboration and engagement in transparently structured co-creative participatory processes that bring representatives from government, civil society and the private sector together (e.g. Jørgensen et al., 2022; Park, 2020; Raaphorst et al., 2019). In this essay, we propose a view of the landscape architect as a person who recognises different kinds of boundaries, knows how boundaries are constitutional to landscape, and understands how cross-boundary collaboration or boundary spanning is imperative to achieving sustainable landscapes.

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†Adri van den Brink passed away during the writing of this essay that is partly based on his farewell address at Wageningen University entitled 'Landscape Architecture and Sense of Boundary'.

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Although boundaries are the 'most basic political element[s] in any landscape' (Jackson, 1984, p. 13) and intrinsic parts of everyday landscape architectural practice, landscape architects tend to look at boundaries more in physical terms. In their contributions to the 'intentional change of landscape pattern' (Nassauer & Opdam, 2008, p. 635), however, landscape architects must also be aware of the processual and relational dimensions of their work, understanding the perceived impact of new or altered boundaries and the boundaries that exist between groups of people, sectors, institutions, disciplines, and values. Despite the multi-disciplinary core in their body of knowledge, when defining their field landscape architects tend to focus on exploring the 'borders of the discipline' in relation to 'neighbouring disciplines' (e.g. Bell et al., 2011). Consequently, riveted to a conventional, subject-oriented way of working, the discipline seems to sometimes assume a sectoral design image. To be successful in addressing grand challenges, however, professionals would need to leave the comfort zone that 'designerly ways of practicing' appears to afford (cf. Cross, 2001) and develop additional skills and capacities.

For the discipline to expand their understanding of boundaries and boundary spanning we propose the concept of 'boundary thinking'. This concept, we believe, will entice landscape architects to reconsider their understanding of landscape boundaries, to unravel the meaning and validity of these boundaries, and to incorporate the underlying values and implications of landscape boundaries into professional practice. Boundary thinking connects with landscape architectural traditions of critical thinking (see e.g. Czerniak, 2018) and with understanding how '[l]andscape architects are much more than neutral, objective, or even rational actors' (van Damme, 2018, p. 103). The designer identity and, in relation to that, the roles landscape architects play are discursively constructed (e.g. Björklund et al., 2020). They are subject to a continuous reconstruction process which itself is part of the 'social turn' in the design disciplines (Lloyd, 2019) that has led to increasingly nuanced and relativist views of the concepts of design, the roles of designers, and the process of designing.

The central questions of this essay are: How to conceptualise boundaries and boundary thinking in landscape architecture, and, based on this conceptualisation, which boundary-spanning roles of landscape architects can be distinguished? To answer these questions, we take the following steps. First, drawing on insights gained from relevant sources about landscape and landscape architecture (e.g. Kühne, 2020), and philosophy and political science (e.g. Liessmann, 2012; Newman, 2006), we discuss the nature of boundaries and argue that for landscape architecture it is crucial to make conceptual distinctions between physical, mental and socially constructed boundaries. Second, to illustrate how boundary thinking can be a creative and productive motive in designing landscapes, we discuss two interventional art projects, namely the Running Fence project in California (Christo & Jeanne-Claude, 2010; Oles, 2015) and the 7000 *Eichen*, or 7000 Oaks, project in Kassel, Germany (Gyrodi, 2014; Körner & Bellin-Harder, 2009). Third, drawing on insights mainly from public management and governance literature (e.g. van den Brink et al., 2019; van Meerkerk & Edelenbos, 2018b; Webb, 1991), we explore boundary spanning further and present four types of boundary-spanning roles that landscape architects could perform and point to the professional capacities needed for them to play each of these roles successfully.

The work done on boundaries and boundary spanning in other disciplinary fields is extensive. This essay offers but a small selection of sources and is meant as an agenda-setting essay that mainly intends to set a process in train to invoke boundary discussions in landscape architecture practice and academia.

Conceptualising boundaries

Boundaries are subject of study in various disciplines, including cultural and political geography, sociology, policy sciences, history and philosophy (e.g. Amilhat Szary, 2015; Chilton, 1998; Jones, 2009; Lamont & Molnár, 2002; Newman, 2006). As a result, boundaries come in different shapes.

Distinctions are for instance made between physical, organisational, institutional, social, sectoral, disciplinary, jurisdictional and administrative boundaries.

Border and boundary often appear interchangeably, but they mean different things. The word 'border' refers to the defined side of a distinct material, such as the edge of a road. A border also constitutes space as territory, for example the border of a country. A boundary *marks* a border. For example, a line on a map marks the 'bounds' of an area, border lines mark city limits, the limits of state power, and so on (Harley, 1988). Boundaries are 'sites of difference' (Abbott, 1995), that is, 'ways of differentiating something from what it is not' (van Broekhoven et al., 2015, p. 1007). Boundaries can reflect social, cultural or professional differences between individuals, groups or organisations, differences between areas and land use types, and between soil types, ecosystems and hydrological regimes. In the book *Lob der Grenze*—or 'In Praise of Boundaries'—Liessmann (2012) states that without boundaries we could not live. Defining boundaries meets a deep-seated human need to make sense of the world by distinguishing one thing from another, and in doing so creating opportunities for thinking and acting.

The resulting boundary lines are helpful for orientation, and, at the same time, are still products of human thought, deliberation and power (Newman, 2006). Although boundaries are often presented in terms of 'binary distinctions', such as Us-Them, Here-There, and Inside-Outside (Newman, 2006, p. 176), more inclusive boundary concepts have been suggested. For instance, Finke (2016) suggests looking at boundaries like a frog. Frogs live in the water *and* on the land; they need both to survive. Metaphorically speaking, boundaries can be amphibian zones, transition zones in their own right.

Boundaries have enabling and constraining properties and as such structure social interaction (Hernes, 2003), indicate what is allowed and what is not, might hamper coordination and collaboration, but also mark out room to manoeuvre. Boundaries are also temporary; they are those zones of transition, never quite finished or fixed (cf. van Broekhoven, 2020). Former defence lines, for instance, leave physical features on the ground and mental marks in our memory. These ever-changing interpretations of history provide rich sources of inspiration for landscape design.

Physical, mental and socially constructed boundaries

Depending on the object of study and its disciplinary perception, different categorizations of boundaries have been developed (e.g. Sturdy et al., 2009; van Broekhoven, 2020; Westerink, 2016). Inspired by Kühne (2020), in particular his theoretical approach to understanding landscape, we argue that for landscape architecture to make conceptual distinctions between physical, mental and socially constructed boundaries is important.

Kühne (2020), employing Popper's idea of three ontological worlds (Popper, 1972), distinguishes between world 1 landscapes (physical, material), world 2 landscapes (individual conceptions, attributions and preferences), and world 3 landscapes (social constructions). While the ontological solidity of Popper's three-world-view itself may be questioned (e.g. Gadenne, 2016), the distinctions they afford help serving analytical purposes well. Kühne demonstrates how landscapes 1, 2 and 3 are both changeable and constitutively dependent on change, with landscape 2 mediating between landscapes 1 and 3. As a social construct, landscape 3 comprises of socially shared interpretations and evaluations, which are individually valued (landscape 2) and projected by the individual into physical spaces (landscape 1). At the same time, the experience with and interpretation of physical spaces (landscape 1) result in new individual conceptions and attributions (landscape 2), and in alternative socially shared interpretations, imaginations and evaluations (landscape 3).

This conceptual distinction between landscapes is useful for understanding the different types of boundaries that landscape architects meet in their work. Boundaries can be, first, physical and material. These boundaries include, for example, signs and structures that mark territorial

divisions. Second, boundaries can be mental, referring to individually perceived, observed and experienced boundaries. These mental boundaries include, for example, boundaries of scenes and views, boundaries between accessible and non-accessible parts of a landscape, and so on. Finally, socially constructed boundaries include, for example, boundaries between institutions, sectors and disciplines, and boundaries between stakeholder groups and their values and interests.

Mental boundaries act as intermediary between boundaries as social constructions and physical boundaries, because social constructions 'must always be grasped or understood by a mind before they lead to human actions, and to changes in our physical environment' (Popper, 1978, p. 164). As planning and designing aim at changing physical landscapes, recognising and understanding all three types of boundaries is fundamental and should emphasise the dynamic processes associated with their social construction, interpretation and transformation.

Boundary thinking and the process of designing

Boundary thinking in landscape architecture thus includes (1) physical boundaries and (2) our individual perceptions and observations of these boundaries, and (3) acknowledges the socially constructed boundaries and unsteady differences between institutions, groups, places and such like, differences that are constantly produced and reproduced, bridged, contested and defended. From this perspective, the process of designing may be conceived as an activity that creates new social constructions. Its outcome, the design (or a vision, narrative, plan), can be conceived of as a social construction in itself. In the process of designing, existing socially constructed boundaries are questioned to create room to manoeuvre, to challenge individual perceptions, observations and experiences, and, ultimately, to induce landscape change. In other words: boundary thinking is crucial for the profession to take better account of the socio-spatial and cultural practices underlying the landscape and the political, social, cultural and moral implications of the changes landscape architects propose.

Transforming narratives: two art projects

To illustrate how boundary thinking has the potential to open up new dimensions in landscape change, we present two interventional art projects that entail re-contextualising everyday objects and boundaries. We have selected these projects based on our personal insights and experience.

The first project is the Running Fence, California, 1972–1976 by Christo and Jeanne-Claude (2010). The 40-km fence of white nylon fabric, divided in more than 2000 panels with a height of 18 ft. (5.5 m), wound through the hills of Sonoma and Marin counties north of San Francisco. The artists created a new structure that redirected thought that people had previously developed about the landscapes it ran through. By offering new landscape experiences, and by 'creating an entirely new boundary, one that responded to its own internal logic rather than to existing political or property lines, Christo and Jeanne-Claude de-familiarized a physical and social landscape people thought they knew' (Oles, 2015, p. 132). The *Running Fence* created a new narrative of landscape; one that was different from previous ones, one that—surprising for it is a fence—emphasised not separation, but connection. Rather than dividing, it unites. During the two weeks of its existence, the fence became a magnet attracting thousands of people who submerged themselves in and became part of this narrative, and, by reflecting on their experiences, created their own, a process that continues today.

The same is true for the second example, the project *7000 Eichen,* or 7000 Oaks, by Joseph Beuys (Gyrodi, 2014; Körner & Bellin-Harder, 2009). This project is part of two '*documenta*', the international exhibition of contemporary art, held in Kassel, Germany, every five years. During the '*documenta 7*', in 1982, Beuys started to plant the first of what would be thousands of oaks

greening the city, each paired with a piece of columnar basalt. He continued the project in 1987 for the '*documenta 8*'. Similar to the *Running Fence*, the lines of trees and stones are two things at the same time; they are boundaries (that separate neighbourhoods) and connectors (linking different parts of the city). While, in the beginning, the diameter of the polygonal basalt columns exceeded that of the trees, over time the growing trees started to dominate the stones and gradually 'dwarfed' them. This process created new narratives of natural processes, of sustainability, and of pushing back boundaries set by ideologies of promoting hard-surface planning solutions at the expense of nature.

At first glance, in both projects, the *Running Fence* and the *7000 Eichen*, the boundaries seem physical. However, they also relate to boundaries that exist in our heads. The artists, by questioning our mental boundaries, are shaking up our perception of the world around us. They present 'transforming narratives', thus socially *re*constructing previously existing boundaries. In other words, both projects express how boundary thinking is a creative and productive motive in landscape design. Transferred to landscape architecture, boundary thinking is about the way people perceive boundaries, create their own transforming narratives, about the temporariness of boundaries and their dynamics as transitional zones, and about the political and ethical implications of boundaries.

Boundary spanning and boundary spanners

To explore the creative and productive potentials of boundary thinking further, we start from the notion that boundaries, understood as spheres of transition, foster exchange and unite as much as they divide. While they are zones of intensive social production (Oles, 2015), it takes 'boundary spanners' to make exchange and interaction happen. Boundary spanners are people 'who are especially sensitive to and skilled in bridging interests, professions, and organizations' (Webb, 1991, p. 231). Landscape architects could be such people.

As a concept, boundary spanning originates from management fields, such as organisational behaviour, knowledge management, public administration and marketing management (e.g. Williams, 2002, 2012; Zhang et al., 2015; Keszey, 2018). Boundary spanners undertake the cross-boundary work needed to develop coordination and collaboration across organisational, sectoral, and disciplinary boundaries (e.g. van Meerkerk & Edelenbos, 2018b). They act as 'exchange agents' (individuals and groups) who have or build ties across boundaries, dually serving to process information and to provide external representation (e.g. Ehrlich & Horvath, 1999). Charged with tasks of 'knowledge sharing for innovation success', boundary spanners link groups of people separated by location, hierarchy or function (e.g. Keszey, 2018).

By carrying out various strategies and actions, boundary spanners link different actors and their interests, build trust between them, and help improve coordination between decision-making and implementation (cf. van Meerkerk & Edelenbos, 2018a). They generally engage in three interrelated activities: (a) *selecting* relevant information on both sides of a boundary, (b) *translating* selected information across boundaries, for example through interpretation, and (c) *connecting* different actors from both sides of boundaries, for example through networking (e.g. Tushman & Scanlan, 1981; van Meerkerk & Edelenbos, 2014). For purposes of jointly finding innovative solutions to spatial-societal problems, planners and designers would want to engage in all of the three activities. They would stimulate the sharing of knowledge beyond boundaries and aim to establish links between organisational, functional, technological, temporal or geographic entities (Nerkar & Miceli, 2016).

Boundary spanners play different roles depending on the kind of boundary-spanning activities they engage in. Drawing on research in the fields of organisational studies (Ancona & Caldwell, 1992) and public management (Williams, 2002, 2012), van den Brink et al. (2019) identified several general boundary-spanning role types that landscape architects might play. The *scout* is one

who focuses on selecting activities, that is, on scanning, collecting and adding information about external ideas and actors (Ancona & Caldwell, 1992). The *ambassador* and *interpreter/communicator* focus on selecting and translating activities, on interpreting the selected information from the external environment to the organisation or project and vice versa. Ambassador activities aim at persuading external actors regarding specific interpretations, and at lobbying for resources (Ancona & Caldwell, 1992). The interpreter/communicator's expertise is in the actors' command of different 'languages', using them in cross-boundary communication (Williams, 2002). The *task coordinator* and *entrepreneur* employ all three activities, but the focus is on connecting. The task coordinator aims at organising coordination and negotiation between actors and organisations (Ancona & Caldwell, 1992). The entrepreneur focuses on exploiting windows of opportunity, linking different issues, and developing strategic alliances and governance arrangements (Williams, 2002).

Considering boundary-spanning activities for landscape architectural practice it is helpful to first recognise the professional capacities that are required to play any of these roles. Landscape architects can be characterised in terms of both domain expert and organisational expert (van den Brink et al., 2019, drawing on Curnin & Owen, 2014). As a domain expert, landscape architects have subject specific competence that includes landscape knowledge and the art of designing. As an organisational expert, landscape architects are particularly knowledgeable about the activities, capabilities and strategic objectives of their own and of external organisations and actors. However, for actively taking on boundary-spanning roles that predominantly rely on social competence and organisational expertise, landscape architects would need to develop additional cognitive and social capacities. To invite landscape architects to broaden their role and develop their boundary-spanning capabilities, the general and rather 'managerial' role types originally developed by scholars in the fields of organisational studies and public management, focussing on public and private actors, would need to be adapted to better connect with landscape architectural expertise and practice.

Landscape architects as boundary spanners

Depending on the situation and the personal capacities, different 'profiles' of boundary spanners emerge from practice (van Meerkerk & Edelenbos, 2018b). Exploring potentials that landscape architects might develop as boundary spanners, we adjust the role types presented above; taking into account an understanding of boundaries and capacities that is specific to the discipline, and current and promising developments in landscape architectural practice. We sketch out four boundary-spanning profiles and present pertinent role types. These are (1) the 'subject-based designer', (2) the 'visionary narrator', (3) the 'process-based designer' and (4) the 'design-led entrepreneur' (Table 1). Roles are defined according to (i) the kind of boundary spanned, (ii) the type of activities a landscape architect may perform when spanning them, and (iii) the cognitive and social capacities needed to fill any of the four roles properly. Design competence and landscape knowledge—i.e. domain expertise—are assumed part of and basis to all roles. Depending on the specific role, landscape architects might acquire additional cognitive and social capacities to combine working as domain and organisational expert. The roles of a landscape architect as a boundary spanner may change in the course of a project, depending on what is needed in a specific phase of the process (e.g. the exploration, planning, or implementation phase) or the collaboration within a project team.

The subject-based designer

Acting as subject-based designer, generally considered the traditional role of the profession (van den Brink & Bruns, 2014), landscape architects are primarily concerned with spanning physical

Table 1. Boundary spanning role types of landscape architects (L).

Boundary spanning role types	Description	Boundaries, key activities, skills and capacities*
The subject-based designer	L acts as landscape expert, focuses on selecting relevant information and ideas, and on translating these into a specific landscape design	*Boundary types*: physical and mental boundaries *Activities*: selecting and translating *Skills and capacities*: cognitive (e.g. information processing capacities), and social (e.g. lobbying and communicative skills)
The visionary narrator	L creates transformative narratives, based on visual metaphors	*Boundary types*: physical, mental and socially constructed boundaries *Activities*: selecting and translating *Skills and capacities*: cognitive (e.g. storytelling and reframing capacities), and social (e.g. societal and political awareness)
The process-based designer	L facilitates and coordinates the design of landscape interventions	*Boundary types*: physical, mental and socially constructed boundaries *Activities*: selecting, translating and connecting *Skills and capacities*: cognitive (e.g. strategic knowledge), and social (e.g. listening, conflict management and organisational awareness)
The design-led entrepreneur	L combines visionary and transformative design with an entrepreneurial or managerial perspective	*Boundary types:* physical, mental and socially constructed boundaries *Activities*: selecting, translating and connecting *Skills and capacities*: cognitive (e.g. storytelling and reframing capacities), and social (e.g. social-political sensitivity, entrepreneurial leadership skills)

*General or functional skills and capacities, such as analytical skills and design skills, are not listed separately.

and mental boundaries while focussing on processes of designing for landscape change (see e.g. Booth, 2011; Starke & Simonds, 2013). Domain expertise is essential, that is knowledge about landscapes and the landscape to be changed. In terms of boundary spanning, the role of subject-based designer includes scouting and ambassador activities (Ancona & Caldwell, 1992), that is, scanning the environment, selecting relevant information and ideas, and including them into design. In the process, landscape architects are involved in translating and interpreting the information and ideas, and in lobbying for activities aimed to convince others to adopt design proposals. For example, a landscape architect, starting from a design brief about and professional insights on mitigating health effects of urban heat phenomena, might focus on proposing urban greening measures. Applying these measures, they are working on remodelling physical space (e.g. replacing a warehouse area with a public park) and boundaries (e.g. eliminating fences and derelict buildings).

Adopting the subject-based designer role is important for landscape architects, especially in situations where design assignments are relatively straightforward in terms of spatial complexity and the number of actors involved. Next to traditional cognitive skills and capacities, performing well in this role also requires social capacities, such as lobbying and communicating.

The visionary narrator

By creating innovative and transformative narratives and plans, the landscape architect is a powerful force (e.g. Oomen et al., 2022), addressing all boundary types, thus physical, mental and socially constructed boundaries. As visionary narrators, landscape architects, (again) by selecting and translating knowledge and information from a variety of sources, are imagining new (innovative) ways to solve spatial problems. As routines tend to be persistent and self-confirming, the starting point of the visionary narrator would be to address socially constructed boundaries between landscapes, organisations, sectors and disciplines. When dealing with

complex spatial challenges, these boundaries not only need to be spanned but, in most cases, also transformed. For example, to communicate the complexities of climate mitigating measures designed at regional scales, the landscape architect might employ 'climate revelatory visualizations' that communicate proposed measures in ways that can convince parties to take action (de Munnik & Lenzholzer, 2020).

In terms of boundary spanning activities, this role type in particular includes ambassador (Ancona & Caldwell, 1992) and interpreter/communicator activities (Williams, 2002). Reframing skills are crucial, as well as the power to create appealing visual metaphors. Designs need to be adaptive and reflexive; they must shake the tree of existing beliefs and insights (cf. van Dijk, 2011). Next to additional cognitive capacities (i.e. storytelling and reframing) also additional social capacities (i.e. societal and political awareness) are required. In the context of addressing grand societal challenges, and the growing need for innovative and transformative solutions and strategies (e.g. Pelling, 2010), the role of visionary narrator is increasingly gaining importance.

The process-based designer

In the role of process-based designer, landscape architects pay special attention to inclusive design processes, and act, for instance, as process managers who support and facilitate participatory design. Resembling the 'task coordinator' role, introduced by Ancona and Caldwell (1992), the relevance of process-based design is growing as the complexity of design problems increases (e.g. Hester, 2010; Kempenaar, 2021). All three boundary types are at play. As process-based designers, landscape architects facilitate and coordinate design procedures and interventions that require systemic understandings of landscape as a socio-cultural, complex and dynamic construct, and the ability to lead inquiries into the perceptions and preferences of the various stakeholders, organisations and institutions involved. Process-based designers are thus engaged in selecting, translating and, particularly also, connecting activities.

For example, charged with making design proposals for river restoration and flood risk management, a landscape architect will first try to identify relevant actors, bring them together, and organise and facilitate interactive design workshops. Since restoring rivers involves breaking down barriers such as dams of which some are listed as cultural monuments and others might be generating hydro-power and recreational value, the process-based designer must actively engage in negotiating between actors and in translating various disciplinary and professional languages and help understanding different meanings (Bruns et al., 2008). These are prerequisites to be successful in developing inclusive design interventions across interrelated spatial scales and across different temporal horizons. To be successful in filling this role, apart from new cognitive capacities such as knowledge about the strategic objectives of other stakeholders, professionals must acquire a range of social capacities, such as listening well, the ability to manage conflict, and organisational awareness (cf. van Meerkerk & Edelenbos, 2021).

The design-led entrepreneur

The perhaps most challenging of the four boundary-spanning roles, the design-led entrepreneur, is developing in the context of and response to calls for design-led planning. All boundary types and all three key activities are involved. The design-led entrepreneur, different from the process-based designer but resembling the (innovative) entrepreneur as described by Williams (2002) and van Meerkerk and Edelenbos (2018b), combines the ambitions of a visionary and transformative designer with leadership and strives for implementation. This boundary spanner has a catalyst role, aims at forming new partnerships, developing innovative governance arrangements, and seeking windows of opportunity. With entrepreneurial leadership, the landscape architect encourages collaboration, stimulates action and facilitates parties to get things done (cf. Gupta

et al., 2010). To this end, the design-led entrepreneur proactively creates connections and feedbacks between the physical, mental and socially constructed landscapes, spanning over their boundaries to bring about changes.

In design-led planning, 'design is seen as a key tool for dealing with complex problems by creating integrated strategies to build resilience, sustainability and liveability' (Lochhead, 2017, p. 7). Examples include the Rebuild by Design competition in New York (e.g. Šakić Trogrlić et al., 2018) and the Water as Leverage for Resilient Cities Asia programme (e.g. Laeni et al., 2021). A design-led approach is both subject-based and process-oriented. Multidisciplinary design teams are commissioned to take the lead in developing and implementing holistic climate-resilience solutions through a collaborative approach and a shared design process. These teams provide an excellent breeding ground for landscape architects to develop in particular their social-emotional capacities and networking skills further, and to cross and span the boundaries that get in their way of getting things done.

New avenues for disciplinary accomplishment

For landscape architecture, we believe advancing boundary thinking has the potential to offer new opportunities. Including boundary spanning into professional portfolios broadens the view on design and adds to the roles designers play (Calderon & Butler, 2020; de Block et al., 2019; Gailing & Leibenath, 2017). To realise new opportunities, we suggest three avenues to pursue: (i) exploring the roles landscape architects play, (ii) understanding the environment that enables boundary-spanning work, and (iii) developing boundary theory in landscape architectural research.

The first avenue is to understand how landscape architects perceive their roles, how they might consider expanding existing roles and adding new ones. To effectively address societal and environmental challenges and thus improve sustainability, contribute to resilience, and add to liveability, landscape architects must continue developing and reinventing the roles they play, without compromising the substantive nature of the accomplished landscape designer. However, it is important that they avoid entrenching themselves in the confines of the domain expert, but use their design capacity and creativity, to be receptive to other voices and collaboratively create and negotiate landscapes to be integrative and inclusive. Adding to traditional selecting and translating activities, this would mean that landscape architects actively engage also in connecting activities, and develop pertinent cognitive and social capacities. Empirical research will help understanding the roles that landscape architects play and the context in which to perform them. By further profiling boundary spanners in the field of landscape architecture, and by giving landscape architects a face as boundary spanners, such research would also contribute to boundary-spanning research in public management and governance (van Meerkerk & Edelenbos, 2018b).

A second avenue to reach greater disciplinary achievement is for landscape architects to better understand the environment that enables boundary-spanning work, that is, the organisational and institutional arrangements that provide the fertile soil and the conditional factors crucial for collaborative design (Lehtonen & Martinsuo, 2008; van Meerkerk & Edelenbos, 2018b), both in the planning and implementation phases of landscape projects. It is important to gain empirical insight in, and inspiring examples of, how to facilitate and organise boundary-spanning work, particularly in diverse contexts and planning cultures. One question is, for example, how boundary-spanning work might best be embedded in complex design and planning situations that involve national and local governments, international financial institutions, NGOs, and various local communities. Research would help to understand political and institutional dynamics and conditions relevant to intentional landscape change.

A third avenue is to develop boundary theory in landscape architectural studies. This essay mainly relies on insights from public management and governance research, and on boundary spanning as one key 'boundary action' (van Broekhoven, 2020; Westerink, 2016).

However, the potentials of landscape architectural boundary work are broader and involve boundary actions such as constructing, negotiating, stabilising and relocating landscape boundaries. In this sense, boundary action may be defined as 'a recurring set of articulations, actions, and interactions that shape a demarcation, taking place over a longer period of time' (van Broekhoven et al., 2015, p. 1009). To further develop boundary theory perspectives, landscape architectural research would draw on insights from a variety of science and technology studies (e.g. Gieryn, 1983; Hoppe, 2010) to examine how landscape architects, next to their boundary-spanning work, (re)construct, challenge, and defend boundaries when designing landscape interventions. Such research would allow for a broader analysis of how boundary work plays a role in various situations, and thereby help strengthening boundary thinking in landscape architecture.

Conclusion

The aim of this essay is to introduce boundary thinking in landscape architecture. Recognising physical, mental, and socially constructed boundaries, we argue that in the process of designing all three boundary types are part of finding sustainable solutions. Subsequently, we argue that landscape architects, knowing how boundaries characterise landscapes, would, now and more so in the future, enable cross-boundary collaboration and develop integrated design solutions via boundary spanning. We propose four boundary-spanning role types, namely the subject-based designer, the visionary narrator, the process-based designer and the design-led entrepreneur. Filling any of these roles requires landscape architects to take a close look at the type of boundaries at stake, the boundary-spanning activities they could perform, and, consequently, at the type of skills and capacities for them to be successful. To this end, it is essential that landscape architects invest effort in developing their social capacities, as these are crucial for them to play the more process-oriented and entrepreneurial roles they will be increasingly called to perform. Based on boundary thinking, the discipline has the potential to strengthen its societal relevance and to open up new avenues for disciplinary accomplishment, both in theory and practice.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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