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Transformative learning in business

Insights from a transdisciplinary study with a local business network

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ABSTRACT

Humanity is facing unprecedented sustainability challenges that require nothing less than a great transformation of societal and economic systems with their institutions, logics and organizations. Targeted problem-solving has reflexively led to unintended side-effects and more of the same type of challenges in the past. New process- and learning-oriented approaches in multi-actor constellations have been suggested to produce more adequate responses to the complexity of the challenges at hand. Business organizations play an essential role in reproducing but also newly shaping logics and, by extension, institutions and structures. In the context of sustainability challenges, societal expectations towards the role of business have become more demanding in recent years, yet organizational responses have often remained separate from serious internal change processes and the forming of transformative intents towards their systemic setting. Learning has been introduced as important mechanism to induce organizational change but conceptual and empirical approaches have fallen short of elaborating on the relation between organizational and societal transformation processes. A gap thus exists in placing organizational learning in a wider context and framing internal change processes as changes in relation to this context. This cumulative dissertation aims at addressing this gap by grappling with the idea of transformative learning in business organizations: What does transformative learning mean on the level of the organization? How can spaces of deliberation and new actor constellations enable transformative learning on the inter-organizational level? And what is the role of the specific context – in this case the place – in supporting or hindering transformative learning at the interface of the business organization and its systemic setting? The empirical data of this research is drawn from a transdisciplinary research process with a local business network

in the real-world laboratory Wuppertal. The three research contributions that are part of this dissertation each approach the questions posed above from different angles and at various levels: The first contribution takes the organizational level into focus and summarizes the status quo of research at the interface of organizational learning and business sustainability from a transformative lens. It identifies three transformative learning principles that foster a change in organizational perspectives vis-à-vis their systemic setting. The second contribution is the core output from the transdisciplinary study and focuses on learning on the inter-organizational level, analysing the learning process of the business sustainability network over a three-year period of time. The main contribution to the literature is the novel application of social learning theory and the concept of reflexivity to the learning journey of a business network and the comprehensive empirical data that emerged from the long-term study period. The third research contribution assesses the interface between locally-rooted firms and the local context asking for the role of place in shaping organizational logics. It thus positions organizational change in a concrete setting: the geographical location that is loaded with symbolic meaning. A key insight from this last research contribution is that a sense of place does not only foster a sustainability orientation as suggested in former research but that it functions as a coping mechanism in handling conflicting logics - a potential lever to transformative learning.

Zusammenfassung

Die Menschheit steht vor noch nie dagewesenen Nachhaltigkeitsherausforderungen, die nichts Geringeres als eine große Transformation gesellschaftlicher und wirtschaftlicher Systeme mit ihren Institutionen, Logiken und Organisationen erfordern. Gezielte Problemlösungen haben in der Vergangenheit reflexartig zu unbeabsichtigten Nebeneffekten

und immer wieder zu gleichartigen Herausforderungen geführt. Neue prozess- und lernorientierte Ansätze in Multi-Akteurs-Konstellationen wurden vorgeschlagen, um angemessenere Antworten auf die Komplexität der anstehenden Herausforderungen zu finden. Unternehmensorganisationen spielen eine wesentliche Rolle bei der Reproduktion, aber auch bei der Neugestaltung von Logiken und - in weiterer Folge - von Institutionen und Strukturen. Im Kontext dringlicher Nachhaltigkeitsherausforderungen sind die gesellschaftlichen Erwartungen an die Rolle von Unternehmen in den letzten Jahren gestiegen, doch die Antworten der Unternehmen blieben oft weit entfernt von ernsthaften internen Veränderungsprozessen und der Formulierung transformativer Absichten gegenüber ihrem Umfeld. Lernen wurde als wichtiger Mechanismus zur Herbeiführung organisatorischen Wandels eingeführt, jedoch wurde dabei selten die Beziehung zwischen organisationalen und gesellschaftlichen Transformationsprozessen beleuchtet. Als Forschungslücke wurde daher die fehlende Verortung organisationalen Lernens im systemischen Kontext und somit die Rahmung interner Veränderungsprozesse als Veränderungen in Bezug auf diesen Kontext identifiziert. Die vorliegende kumulative Dissertation adressiert diese Lücke, indem sie sich mit der Idee des transformativen Lernens von Unternehmen auseinandersetzt: Was bedeutet transformatives Lernen auf der Ebene der Organisation? Wie können Räume der Deliberation und neue Akteurskonstellationen transformatives Lernen auf der inter-organisationalen Ebene ermöglichen? Und welche Rolle spielt das konkrete Umfeld - in diesem Fall der Ort - bei der Unterstützung oder Verhinderung von transformativem Lernen an der Schnittstelle zwischen der Unternehmensorganisation und ihrem systemischen Umfeld? Die empirischen Daten dieser Forschung stammen aus einem transdisziplinären Forschungsprozess mit einem lokalen Unternehmensnetzwerk im Reallabor Wuppertal. Die drei Forschungsbeiträge nähern sich den oben gestellten Fragen aus

unterschiedlichen Blickwinkeln und auf verschiedenen Ebenen: Der erste Forschungsbeitrag nimmt die Organisationsebene in den Fokus und fasst den Status quo der Forschung an der Schnittstelle von organisationalem Lernen und unternehmerischer Nachhaltigkeit aus einer transformativen Perspektive zusammen. Er identifiziert drei transformative Lernprinzipien, die einen Perspektivwechsel in Organisationen gegenüber ihrem systemischen Umfeld fördern. Der zweite Forschungsbeitrag ist das zentrale Ergebnis der transdisziplinären Studie und konzentriert sich auf das Lernen auf der interorganisationalen Ebene, indem der Lernprozess des Unternehmensnetzwerks über einen Zeitraum von drei Jahren analysiert wird. Der zentrale Beitrag besteht hier in der Anwendung der Theorie des sozialen Lernens und des Konzepts der Reflexivität auf den Lernprozess eines Unternehmensnetzwerks sowie in den umfassenden empirischen Daten, die aus dem Langzeitstudienzeitraum hervorgegangen sind. Der dritte Forschungsbeitrag nimmt die Schnittstelle zwischen lokal verwurzelten Unternehmen und dem lokalen Kontext unter die Lupe und beschäftigt sich mit der Rolle des Ortes bei der Ausgestaltung von Organisationslogiken. Damit wird organisationaler Wandel in einem konkreten systemischen Umfeld verortet: dem geografischen Standort, der mit symbolischer Bedeutung aufgeladen ist. Eine wichtige Erkenntnis aus dieser Untersuchung ist, dass ein Ortssinn nicht nur eine Nachhaltigkeitsorientierung fördert, wie in früheren Untersuchungen angenommen wurde, sondern dass er als Bewältigungsmechanismus im Umgang mit widersprüchlichen Logiken fungiert - ein potenzieller Hebel für transformatives Lernen.

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LIST OF PUBLICATIONS

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LIST OF ABBREVEATIONS (MANUSCRIPT)

SME	Small-and-medium-sized enterprises
Td	Transdisciplinary research
UNFCCC	United Nations Framework Convention on Climate Change
UrbanUp	Upscaling Strategies for an Urban Sharing Society (Project title)
WBGU	German Advisory Council on Global Change
WCED	World Commission on Environment and Development
ZN³	Zukunftskreis Nachhaltigkeit Hoch 3 / Future Circle Sustainability

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PART I: ACCOMPANYING MANUSCRIPT

RESEARCH CONTEXT

Global challenges and the required transformation

The challenge, unique in history, with regard to the upcoming transformation into a climate-friendly society is advancing a comprehensive change for reasons of understanding, prudence and providence.
(WBGU, 2016, p. 5).

Humanity is facing unprecedented ecological challenges in 21st century. In the era of the Anthropocene (Crutzen, 2006), we have left a safe operating space on this planet as we are navigating towards a variety of potential tipping points in our ecosphere (Rockström et al., 2009; Steffen et al., 2015). Climate change as one of the most prominent symptoms has received growing political and societal attention in recent years and yet, action remains far from developing the much-needed impact to keep the temperature rise close to 1.5 degree Celsius as formulated in the Paris agreement in 2015 (UNFCCC, 2015). The Corona pandemic has held the world in its grip for the past two years and with the war in Ukraine we are stumbling yet into the next mode of crisis. However, these crises are not separated from the major ecological one we are amid. Rather, they are symptoms and foretastes of what more is to come in an all-connected, globalized and full world in 21st century (Weizsäcker & Wijkman, 2018). With its seminal agreement in 1987, the World Commission on Environment and Development under the chairmanship of Gro Harlem Brundlandt has coined the expression of Sustainable Development, pointing to the responsibility that the current generation has in sustaining the planet and its resources for future generations (WCED, 1987). Thirty-five years, many agreements and little globally concerted action later, Greta Thunberg has given the next generation a face and a voice. Movements following her initiative have successfully brought the topic of climate change with its many related societal challenges much more prominently

to the global political agenda. However, responses are still far from showing the necessary impact. Given the scope and the rate at which humanity is currently compromising its own ecological foundations, societal changes needed in all spheres amount to nothing less than a required “Great Transformation” (Schneidewind, 2018; WBGU, 2011). Building on the notion by Karl Polanyi (1944), the German Advisory Council on Global Change defines a "Great Transformation" as "a comprehensive transformation that provides for the restructuring of national economies and the global economy within [...] [planetary] guard rails in order to avoid irreversible damage to the Earth system and ecosystems and their impacts on humanity" (WBGU, 2011, p. 417). What we are grappling with is therefore an unprecedented transformation challenge concerning institutions, organizations and individuals.

Reflexive modernization and the role of learning

Taking a mirror as an analogy, reflection refers to
the faithful reflection of all that is in the field of vision,
while reflexivity involves the realization that the subject,
when looking into the mirror, is a large part of the object.
(Stirling, 2006, p. 5)

Mastering the transformation challenges ahead requires new problem-solving approaches. In Habermasian terms, modern society has reached a point at which the system, that is, the logics of the economy and the state, have colonized the life-world in a way that society is trying to approach problems with a technical logic and to steer problems rather than coming to a mutual understanding of how to solve them in the long-term (Habermas, 1981). The latter has been argued to require the creation and protection of spaces within which processes of shared learning through communicative interaction can flourish (Wicks & Reason, 2009). Along the same lines, Beck et al. (2003) describe the phenomenon of how rational problem-solving approaches of modern society reflexively produce unintended side-effects and thus

produce new problems that again are solved with the same rational approach. They call this vicious cycle “reflexive modernization”, which in the context of transformation research is referred to as “first-order reflexivity” (Voß & Kemp, 2006). Building on this insight, the awareness for the reflexive character of modernist problem-solving (second-order reflexivity) enables a more systemic and exploratory approach to complex challenges with a new process-orientation that brings together different perspectives on a problem. Problems are no longer solved but they are dealt with by means of an experimental approach and learning processes between actors are initiated. Learning in this context is defined as a process of acquiring and generating new knowledge and insights, and of meaning-making of experiences in communicative interaction, in a reciprocal relationship with the systemic setting (Beers et al., 2016). It is a non-linear, iterative process in which ideas and possibilities for collaborative action are being developed, experimented with and pursued in a diversity of networks (van Mierlo et al. 2020). Thus - often local - spaces for collaboration, learning and innovation have been identified as key to taking on challenges effectively and collaboratively (Beers & van Mierlo, 2017; Bos et al., 2015; Wals, 2009). Sustainable development – often referred to as normative orientation - actually describes a functional condition to this type of problem solving. It refers to societal processes that can be sustained over time without eroding its own foundations (Voss & Kemp, 2006). In the context of sustainability transition research, van Mierlo et al. (2020) point to the need to draw on different learning theories in order to develop an understanding of embedded learning in transition processes. Whereas various learning traditions each focus on important contexts, none of them sufficiently address the complexity of sustainability transitions (van Mierlo & Beers, 2020). Learning is unanimously suggested to be essential for processes of transformation to take place but the extent to which learning may lastly lead to wider systemic change is highly dependent on the

transformative character of learning (Beers & van Mierlo, 2017; Halbe & Pahl-Wostl, 2019; Vinke-de Kruijf et al., 2022). And last but not least, a new understanding of knowledge generation and process-oriented learning is also the basis for a new understanding of research, in which the researcher becomes part of the learning process (Schneidewind et al., 2016).

The responsibility of business in 21st century

The complexity and persistent nature of broader societal sustainability issues pose new challenges, requiring new conceptual models for researching the relation between business, the natural environment and society as a whole.
(Loorbach & Wijsman, 2013, p. 21)

Business organizations play an essential role in the transformation of societies (Palzkill & Augenstein, 2017; Palzkill, 2018). On the one hand, they are central to producing sustainability challenges. Negative effects on society and the natural environment have long been externalized and the "business of business [was] business" (Friedman, 1970). On the other hand, business organizations are key to mastering the transformation as they are reproducing - but also potentially shifting - the structures by which current systems operate (Schneidewind, 1998). In recent decades, opposing Milton Friedman, the idea of a responsibility of the firm beyond a shareholder value has increasingly prevailed (Carroll, 1991; Elkington, 1994; Zollo et al., 2013). The notions of Corporate Responsibility or Corporate Sustainability have advanced to be indispensable in every business organization - their interpretation, however, varies widely (Ehrenfeld, 2005; Espinosa & Porter, 2011). Engaging with stakeholders has increasingly become a moral obligation (Carroll, 1991) and seen as a strategic activity to develop and maintain a societal license to operate (Howard-Grenville et al., 2008). Whereas stakeholder theory has first been interpreted more narrowly as the responsibility of the firm to create value for direct stakeholders (Freeman, 1984) debates on

a more general societal responsibility of the firm have gained momentum in the past years (Cantino et al., 2017; Martinuzzi & Krumay, 2013). Thus, the question we are dealing with is no longer *if* the business organization has a responsibility towards society but rather *the extent* to which it is part of solving societal challenges (Dyllick & Hockerts, 2002; Dyllick & Muff, 2016). And while the focus of transformation research has mostly been placed on innovative start-ups or social business that start out from a transformative stance towards addressing societal challenges, a big lever lies in traditional firms and incumbent businesses that are the biggest reproducers of the current economic system (Hockerts & Wüstenhagen, 2010; Späth et al., 2016). It is also in these incumbent organizations that tensions most likely arise between prevailing logics of doing business and the demand for more sustainable behaviour (Augenstein & Palzkill, 2015; Radoynovska et al., 2020). And despite a growing awareness for sustainability challenges, our economies continue along unsustainable trajectories (Loorbach, 2020) and business responses too often remain separated from serious internal change processes (Crilly et al., 2012; Loorbach & Wijsman, 2013; Slawinski et al., 2017). Learning processes have been suggested to play an essential role for inducing organizational change (Espinosa & Porter, 2011; Quartey & Wells, 2020; Wijethilake & Upadhaya, 2020), yet rarely have conceptualizations of learning addressed profound change in organizational perspectives in relation to the wider context (Fortis et al., 2018). Furthermore, referring back to the notion of reflexive governance, coping with the complex sustainability problems at hand goes beyond the capacity of any organization to act unilaterally (Loorbach & Wijsman, 2013; Voß & Kemp, 2006). Rather, it is from new actor constellations and inter-organizational collaboration that a more sustainable societal and economic trajectory will – at best – emerge (Bos et al., 2015).

Research gap & research questions

The complexity of sustainability challenges require new conceptual models for researching the relation between business and society as a whole (Hahn et al., 2010; Loorbach et al., 2020). Whereas much of the discourse on sustainable development is focusing on the macro level of the economy or the society, many approaches to business sustainability have been placed exclusively on the micro level of the organization (Dyllick & Muff, 2016). Approaches linking both levels effectively have often been lacking (Whiteman et al., 2013). Learning has been introduced as important mechanism to induce organizational change but conceptual and empirical approaches have fallen short of elaborating on the relation between organizational and societal transformation processes. Therefore, a gap exists in placing organizational learning in its systemic context and framing internal change processes as changes in relation to this context. This cumulative dissertation aims at addressing this gap by grappling with the idea of transformative learning of business. The objective is to conceptually and empirically shed more light onto organizational learning processes from a transformative lens, that is, studying organizational learning processes in the context of their wider systemic setting. The research questions arising from this background are:

How can the notion of transformative learning help to relate organizational change processes to the systemic setting?

- What does transformative learning mean on the level of the organization?
- How can spaces of deliberation and new actor constellations enable transformative learning on the inter-organizational level?
- What is the role of the context – in this case the place – in supporting or hindering transformative learning at the interface of the business organization and its systemic setting?

CONCEPTUAL FRAMEWORK: A NESTED APPROACH TO LEARNING

The following section introduces the conceptual framework structured along the three types of knowledge that are produced in the context of transdisciplinary research (Pohl & Hirsch Hadorn, 2007; WBGU, 2016) (Fig. 1). Whereas systems knowledge describes the current system or problem situation and answers the question "*what is?"*, target knowledge is normatively deduced from the impetus of a sustainable development and defines a desirable state in the future by answering the question "*what ought to be?".* Transformation knowledge then aims at closing the gap between status quo and desirable future by answering the question *"How to"?.* This differentiation is employed here to structure the research subject with an overview of core assumptions (Fig. 2) and, in a second step, to deduce a nested learning approach as a conceptual frame to the research contributions (Fig. 3). The individual research contributions then conceptually draw on and further produce knowledge in each of these categories.

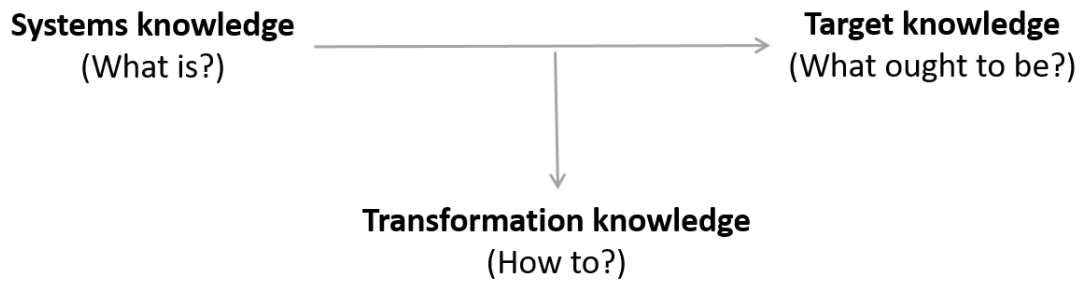

Fig. 1. Three types of knowledge in transdisciplinary research that provide the basic structure to the conceptual framework (own visualization based on Pohl & Hirsch Hadorn, 2007)

Systems knowledge: Co-evolutionary dynamics as underlying mechanism to learning

The majority of the efforts within and between businesses over the past decades have primarily sought to improve existing systems of production and consumption […] but not radically transforming them.
(Loorbach & Wijsman, 2013, p. 22)

The conceptual thinking in this dissertation project draws on sustainability transition research that starts from the idea that sustainability challenges can only be overcome with structural systemic changes in society, the economy, culture, institutions and organizations (Kemp et al., 2007; Rotmans & Loorbach, 2010). A co-evolutionary perspective as is the basis to sustainability transition research suggests fundamental changes in society and the economy to imply the need for fundamental changes in markets and individual businesses (Köhler et al., 2019). Business organizations are essential actors in co- and re-producing our current economic and the societal system. Based on Anthony Gidden's structuration theory, societal structures are assumed to shape the way business is being done and new organizational behaviour can in turn challenge dominant structures (Giddens, 1984). Research in this context focuses on the complex interplay between niches, in which actors consciously develop and test sustainable alternatives, and the existing mainstream of established and often unsustainable structures in the economy and society. This interplay has formerly been described with the help of institutional theory and the influence of logics derived from societal institutions (Fuenfschilling & Truffer, 2014). Thornton et al. (2012) refer to six first-level logics, representing the major institutions of society: the family, community, religion, state, market, professions, and corporation. At the level of the organization, institutional logics translate into "a set of assumptions and values, usually implicit, about how to interpret

organizational reality, what constitutes appropriate behaviour, and how to succeed" (Thornton & Ocasio, 1999, p. 804). Idealtypically, business organizations are guided by the dominant logic of the market and of the corporation (Laasch, 2018). In reality, businesses are confronted with complex environments as they do not only operate in markets but in relation to other organizations, in various ownership structures or rooted in a certain place (Radoynovska et al., 2020). Over the past decades, the demand for a new corporate responsibility in the context of sustainability challenges has introduced another layer of institutional pluralism to business (Bondy et al., 2012; Campbell, 2007; Wickert & Risi, 2019). As a result, different normativities may be successfully aligned in the organization or they may be misaligned producing a source of tension and contradictory outcomes (Randles & Laasch, 2016). Niches in that context refer to actors and initiatives that rethink the way that business is being done – thus successfully implementing new combinations of logics. Obvious examples for niche actors in that context are social, sustainable or community-based businesses that are normatively focused on solving societal challenges combined with an economic logic as a means to pursue their objective (Laasch & Pinkse, 2019). However, niches are not only to be found in actors that have explicitly incorporated alternative logics but they can also be found in new actor constellations and (local) experimental settings that traditional businesses are involved in (Loorbach et al., 2020). Learning has been stressed as important lever for changing corporate logics in the context of sustainability transitions, yet respective learning theories have fallen short of relating learning processes on different levels to each other (van Mierlo et al., 2020). Most approaches to organizational change have stayed within given institutional and structural boundaries of the dominant economic logic. Furthermore, any learning in the context of sustainability transitions occurs not only in an existing institutional but also in a physical context (Hansen & Coenen, 2015). Both contexts may influence the learning process

in the form of setting the agenda and constraining the room for change, but they may also enable learning (van Mierlo et al., 2020). A growing research body has called for the need to better understand the influence of regional and community embeddedness in relation to organizational change processes (Frantzeskaki et al., 2018; Greenwood et al., 2010; Hansen & Coenen, 2015; Reay & Hinings, 2009). Place-related research suggests the location to provide a specific ecosystem (Volkmann et al., 2021) and to be loaded with symbolic meaning (Chapin & Knapp, 2015). Thus organizations that are rooted in a specific location develop an attachment - a sense of place - that has been argued to be positively related to a sustainability orientation (Shrivastava & Kennelly, 2013). And it is in the local context that cross-sectoral actor constellations form and that actors engage in collaboration and joint learning (Cantino et al., 2017).

Target knowledge: Change in organizational perspectives as objective of learning

In a time when more and more corporations claim to
manage sustainably, we need to distinguish between those companies
that do and those that do not make effective contributions
to sustainable development.
(Dyllick & Muff, 2016, p. 156).

Change processes in firms in the context of sustainability challenges have often focused on reducing unsustainable firm-level behaviour rather than on increasing the sustainability of the broader societal system they operate in (Loorbach & Wijsman, 2013). Research has brought forward a variety of typologies representing different levels of business sustainability. While most of them remain on the level of change in organizational performance and mitigating negative impact within given institutional boundaries (Ehrenfeld, 2005), fewer argue for the need to develop new approaches targeting fundamental changes in business in light of societal challenges (Boons, 2009; Dyllick & Muff, 2016; Loorbach &

Wijsman, 2013). The evolution of business sustainability has often been associated with processes of organizational learning (Fortis et al., 2018; Molnar & Mulvihill, 2003). Organizational learning has been identified as a promising lens to frame an organization's capacity to process knowledge (Lee & Klassen, 2016) and to help understand the multidimensionality of sustainability-related change processes in firms (Fortis et al., 2018). Over the past two decades, the concept has thus increasingly been applied to theorize and analyse change processes related to sustainability efforts in firms and industries (Quartey & Wells, 2020; Wijethilake & Upadhaya, 2020). Organizational learning theory focuses on the interplay between learning on the individual and the organizational level. In their seminal work, Argyris & Schön (1978) distinguish superficial learning (single-loop learning) from deep learning at the level of questioning underlying mechanisms (double-loop learning). However, the extent to which double-loop learning conceptually and empirically addresses dominant organizational logics in relation to the institutional context varies widely. An early typology by Zadek (2004) suggests five stages of organizational learning for corporate responsibility that range from a defensive stage, in which organizations deny responsibilities to a civil stage, in which organizations promote broad industry participation in corporate responsibility and strive to overcome first-mover advantages by opening up the market to collective action. Going one step further, Boons (2009) suggests four types of strategic behaviour in the context of corporate sustainability ranging from reactive and adaptive to proactive and transformative. The transformative stage creates a new category for those firms that operate beyond a purely economic logic and take on societal challenges as their core business purpose. Building on the same idea, Dyllick & Muff (2016) suggest a typology ranging from "business-as-usual" to three levels of business sustainability. A "business sustainability 3.0", or what the authors refer to as "true business sustainability" implies a shift of the

organizational perspective from inside-out (what do we do and how do we influence the environment with it?) to outside-in (what are challenges out there that we want to address?). The latter – similar to Boons (2009)'s transformative strategy - describes a shift in orientation towards proactively targeting change in the systemic setting. Such a strategy implies an anticipatory role of business that builds up internal capacity but that also engages in actively setting-up, participating in and helping guide coalitions of frontrunners (Boons, 2009, Loorbach & Wijsman, 2013). The assumption is that such transformative strategies indeed contribute to shaping transitions towards sustainability in that respective setting - be it the market that the firm is operating in or the place that it is rooted in. In place-based studies, firms with a transformative intent have been described as emerging governance actors that co-produce and shape urban contexts (Westman et al., 2020) and that play an important role in building local community resilience (Burch et al., 2020; DiBella et al., 2022). Such a profound change in organizational perspectives from "inside-out" to "outside-in" implies a new set of logics that goes beyond a purely economic one and most likely includes a combination of logics such as the one of the local community, the family or politics (Randles & Laasch, 2016). In this context, research refers to emerging hybrid models such as sustainability logics (Laasch & Conaway, 2015) or responsibility logics (Radoynovska et al., 2020) that form in between different first-level logics and the transversal societal demand for sustainability.

Transformation knowledge: Reflexive learning as upscaling mechanism

We perceive learning in transitions as a process of acquiring and generating new knowledge and insights, and of meaning-making of experiences in communicative interaction, in a reciprocal relationship with the social, physical and institutional context.
(van Mierlo et al., 2020, p. 5)

Drawing on the described systems and target knowledge, a challenge exists in breaking through the co-evolutionary reproduction of long established logics of doing business and profoundly changing organizational perspectives so that sustainability challenges are brought into the focus of business operations. In order to tackle this challenge, the notion of reflexivity comes back into play. It picks up on the described shift from "inside-out" to "outside-in" on the level of social learning processes. The assumption derived from former research is that reflexive learning as emerging transformative orientation can function as upscaling mechanism at the interface of organizational and institutional transformation processes (Augenstein et al., 2020). Research suggests deliberative spaces and a new process-orientation to learning as key to developing reflexivity and finding adequate responses to complex societal challenges in between different actors (Beck et al., 2003, Voss & Kemp, 2006, Beers et al., 2016). From an evolutionary perspective, spaces for change emerge in processes of human interaction and communication. The idea of discursive spaces that enable learning has been taken up with concepts such as the transition arena in transition management (Loorbach, 2010), the agora in transdisciplinary science (Nowotny et al., 2003; Pohl et al., 2010) and the communicative space in action research (Wicks & Reason, 2009 drawing on Habermas). Social learning has been referred to as key supporting process in this context (Leeuwis & Aarts, 2011; Woodhill, 2010). The term social learning itself has a long history of being theoretically linked to sustainability issues (van Mierlo et al., 2020) but has almost

exclusively been applied to the subject of natural resource management (Halbe & Pahl-Wostl, 2019; Rodela, 2011). Social learning emerges from the exchange of heterogeneous actors and their perspectives, produces knowledge and trust and serves as the basis for joint action (Pahl-Wostl, 2006). Diverse perspectives and negotiation between actors are seen as important resource for dealing with complex issues (Wals, 2009). Extending the narrower focus of organizational learning, it refers to learning in informal networks of actors that meet occasionally because they are addressing an issue of mutual interest (van Mierlo & Beers, 2020). Participants of a group co-construct shared meaning during communicative interaction (van den Bossche et al., 2011), develop overlapping perspectives on objectives and jointly identify options for change (Hajer & Laws, 2008). In such shared discursive spaces, wider discourses enter the interaction through actors' mind-sets, are re-negotiated, altered and newly formed (Leeuwis & Aarts, 2011). During the learning process, learning groups may reflexively start to influence their environment so as to make it more conducive to change (Beers and van Mierlo, 2017). Together, the systemic setting and the learning process produce the evolutionary dynamic in transition processes (Raven, 2007). Such learning processes have primarily been studied in the context of stakeholders that share a transformative orientation from the outset. Less focus has been on business learning and on business actor collectives that start out from a less transformative stance (van Mierlo et al., 2020). However, such actor collectives, for example business networks, can function as intermediary platforms that connect organizational learning to the systemic setting. Drawing on the logics' perspective, it is in "collaborative relationships" that seemingly clashing logics are being negotiated, weighed against each other and newly reconciled (Reay & Hinings, 2009). In this context, learning is the deliberative process between actors. It becomes observable in discursive shifts and resulting action. Such processes on other subjects than natural resource management

have been conceptually described but rarely been studied over a longer period of time (van Mierlo & Beers, 2020). Some studies have analysed learning processes on the level of single settings of communicative interaction but a gap exists in studying aggregate learning processes that produce reflexivity on the intermediate level (Beers & van Mierlo, 2017). The systemic setting of such learning processes might be a sector but also a shared geographical location. In the context of joint natural resource management, a mutual dependence or boundary object between stakeholders has been described as important precondition for social learning (Cantino et al., 2017; Schusler et al., 2003). Applying the same thinking might suggest a shared location of business organizations as promising context for transformative learning on the inter-organizational level to take place.

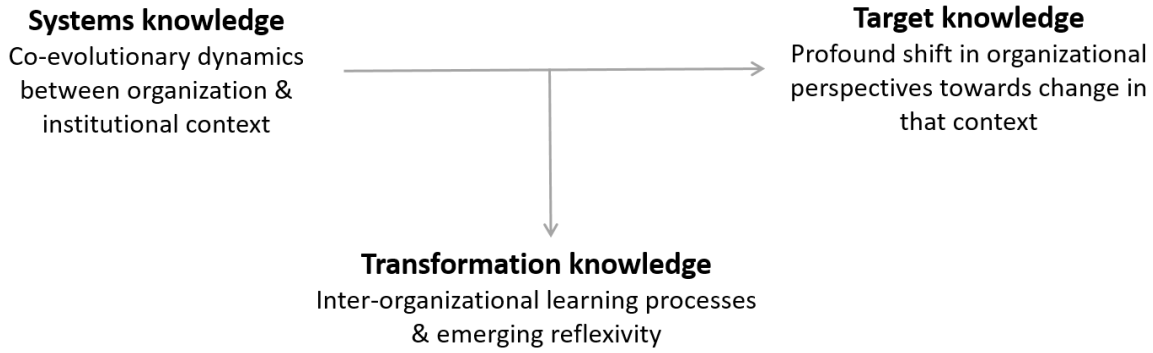

Fig. 2. Overview of the basic assumptions of the conceptual framework structured by the three types of knowledge (own visualization).

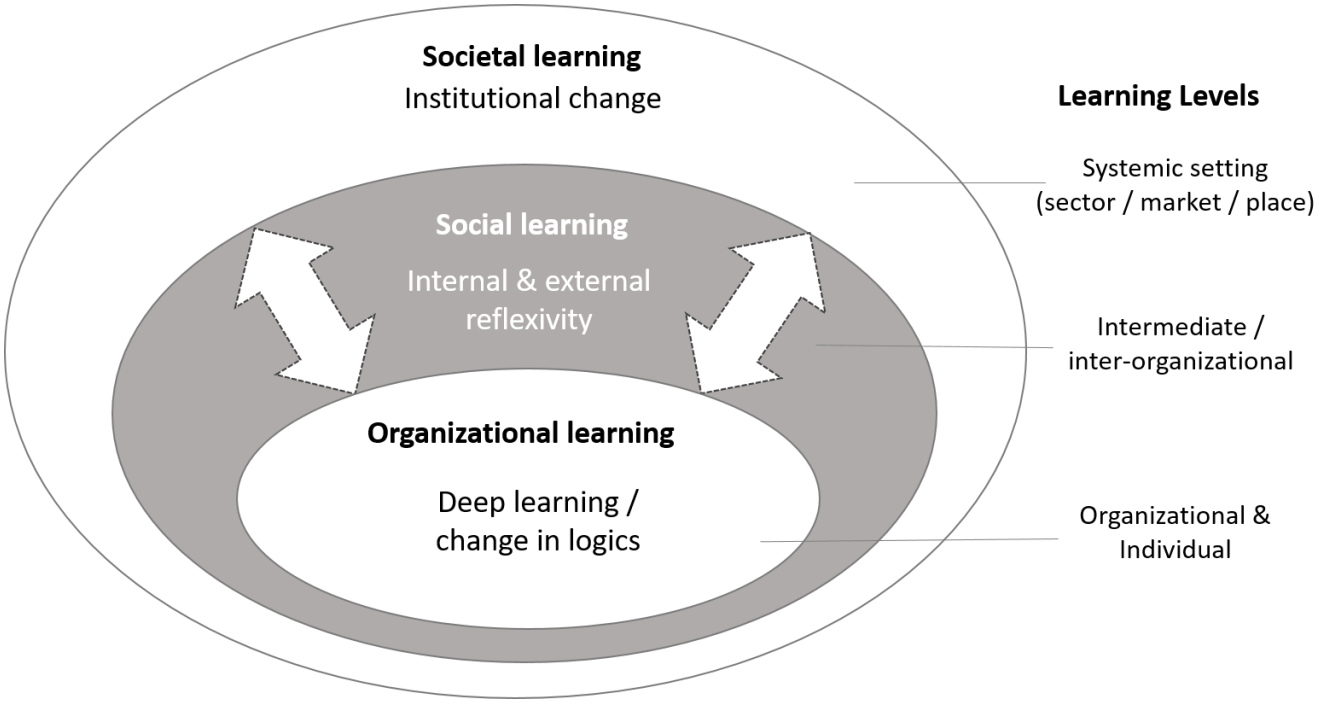

Fig. 3. The nested approach to transformative learning across different levels with social learning and an emerging reflexivity on the inter-organizational as intermediary mechanism between organizational and societal learning processes (own visualization).

RESEARCH APPROACH: A TRANSDISCIPLINARY STUDY

Research should generate both systemic, reflexive
and anticipative knowledge. This must be additionally
complemented by extensive participative elements,
both in terms of social implementation and the research process
as such, as participation in the transformation process itself
creates the basis for its legitimation and acceptance.
(WBGU, 2011, p. 321)

This dissertation emerged from the junior research project Urban Up – Upscaling Strategies for an Urban Sharing Society (Augenstein, Bachmann, Hermelingmeier, et al., 2020a). The project as a whole set out to examine niche initiatives in the real-world laboratory Wuppertal and to identify upscaling mechanisms that leverage the sustainability potential of these niches for urban transformation (Augenstein, Bachmann, Hermelingmeier, et al., 2020b). In contrast to a common best practice approach and an understanding of upscaling as growth or

replication, the intent of the project is to identify promising patterns that foster reflexive governance. As one research stream, this dissertation focuses on business organizations as potentially transformative agents and as co-producers that shape and are shaped by their institutional and systemic setting. More specifically, the empirical part of this research has monitored and facilitated the development of a local business sustainability network as an example of a space for inter-organizational learning and emerging reflexivity. The following will give a brief insight into transdisciplinary research, into the case ZN3 and into reflections of the researcher's role in this setting.

A transdisciplinary research approach

Transdisciplinary research (td) has emerged from the quest for new research strategies at the science-society interface with the objective to contribute to sustainability transformation (Kates, 2001; Schneider et al., 2019; Schneidewind et al., 2016). The process-oriented approach deals with real-world societal challenges, enables collaborations between science and practice and calls for self-reflectiveness (Bergmann et al., 2021; Pohl et al., 2010). The objective of the td project is to grasp the complexity of the problem, take into account the diversity of perceptions of the problem, link abstract and case-specific knowledge, and develop knowledge and practices that promote what is perceived to be the common good (Pohl & Hirsch Hadorn, 2007). In the context of reflexive governance, td research has been argued to be a societal process, where researchers and societal actors engage in joint learning and action (Jahn et al., 2019). Not only does the approach itself open up the space for trustful relations, deliberation and learning (Walter et al., 2007) but also does it aim at promoting self-reflexive processes (Schneider et al., 2019), in which research and practice alike come to

re-evaluate their role in the larger systemic setting. In a td setting, the researcher becomes an active part and influencing factor on the learning and research process. Such an effect is not regarded as an unintended side-effect but as the new mode of research in line with a second-order reflexivity thinking as introduced earlier (Voss & Kemp, 2006). Nevertheless, the engagement of the researcher in the process requires careful reflection (Wittmayer & Schäpke, 2014). Drawing on social interaction research, the concept of roles has been suggested to provide a useful instrument for reflections of the researcher's changing position and actors' relations in a social learning process (Hilger et al., 2018; Pohl et al., 2010; Wittmayer et al., 2017). The "real-world laboratory" (Schneidewind & Singer-Brodowksi, 2015; Wanner et al., 2018; WBGU, 2016) Wuppertal served as common boundary object and as the context for science-society collaboration in the Urban Up project. The specific td project in this work is focusing on the local business network "Zukunftskreis Nachhaltigkeit Hoch 3" as a promising case of a space for inter-organizational learning and emerging reflexivity.

The case "Zukunftskreis Nachhaltigkeit Hoch 3 (ZN³)"

The Zukunftskreis Nachhaltigkeit Hoch 3 (ZN³) was initiated by a few representatives of Wuppertal-rooted firms in 2017 as a local network and learning platform with the objective to exchange on business sustainability practices. Having started with eight firms, the group grew to about 20 active members in 2019 and about 35 members in 2022. Not only did the focus of the group widen from the city of Wuppertal to a regional focus but also did the objective shift from an exchange on organizational best practices to initiating regional projects with a role model character. Throughout the development of the network, two "boundary objects" (Star & Griesemer, 1989) or loosely defined frames of reference served

as the glue for the group to form and stick together: On the one hand, sustainability served as the normative orientation that despite very different definitions provided the initial reason to form the network. On the other hand, the place or the region provided the common geographical and symbolic reference frame that allowed for the development of a group identity. Definitions of business sustainability varied widely in the beginning and so did the formulation of objectives of the network, required structures and expected outcomes. (Fig. 4). The character of the network as a learning platform integrating those different perspectives formed in a process of continued negotiation and reflection, in which the organization of a “Sustainability Night” in 2019 took on an important role. The joint planning of the event served as intense negotiation period, in which assumptions had to be made explicit and common objectives had to be formulated. Whereas discussions in 2018 all evolved around best practices in the realm of reducing the organizational footprint, visions for the network that were brought forward in interviews taken in 2019 mostly related to initiating transformative projects in the region: Ideas ranged from building a regional ecosystem and bundling synergies (e.g. sharing e-mobility fleets) to concerted activities (tree planting or waste collection days) and the formulation of joint objectives (making the region climate neutral by 2030). Due to the Corona pandemic, the dynamic in the network changed in 2020. Decisions were taken in smaller groups and the general dynamic in the group decreased. Nevertheless, the group grew throughout that time and the network attracted more and more attention from outside. In 2021, representatives of the network were invited to several supra-regional events and to become part of a municipal steering group concerned with developing a sustainability strategy for the city. Thus, the network developed from a business exchange platform to a governance actor in the region. The region itself is characterized by a long industrial history on the one hand and a big outflow of industry in the

second half of the past century on the other. A shrinking economic prosperity coincided with a dwindling population, industrial brownfields and social challenges. In recent decades, however, the region has experienced a comeback with an active civil society scene, creative spaces, sustainability-oriented research institutions, and with a continued high number of family-owned businesses or small-and-medium-sized enterprises (SME) that have remained loyal to the region. Although very different in size, scope and sector, the firms that are part of the ZN³ share a tradition (between 30 and 130 years) in the region. The majority falls into the category of SME and most of them are family-owned. The three globally operating companies – although not SME by size or scope – are also family-owned and emphasize their rootedness in the region. Generally, all members have stressed their attachment to Wuppertal or the larger region. Associations with the place that were frequently mentioned were the optimism and mood of departure due to the region's history, the high density of family-owned firms, the inspiration given by the resident research institutions, the hands-on nature of the people in the region, the civil society scene and the beautiful landscape surrounding the three cities in the region: Wuppertal, Solingen and Remscheid. More generally, all members agreed that the rootedness in the region was an important common bracket amongst members of the ZN³ and the basis for trustful relationships ("You can always reach out and meet up for coffee. It's the proximity that is key to what we do"), a group identity ("We as firms in the Wuppertal region share a tradition and a hands-on culture") as well as joint action ("As we are all rooted in this region, it makes sense to give back and get active locally"). In a storytelling workshop in 2021, various scaling strategies were brought into focus, ranging from growth of the network itself ("We want to reach all 15.000 firms in the region"), to replicating the format in other regions ("The network and its activities can serve as a role model for other regions") and to embedding sustainability strategies in the

regional context (“If we want to create an impact, we should get active right here and now and not wait for others to do it”).

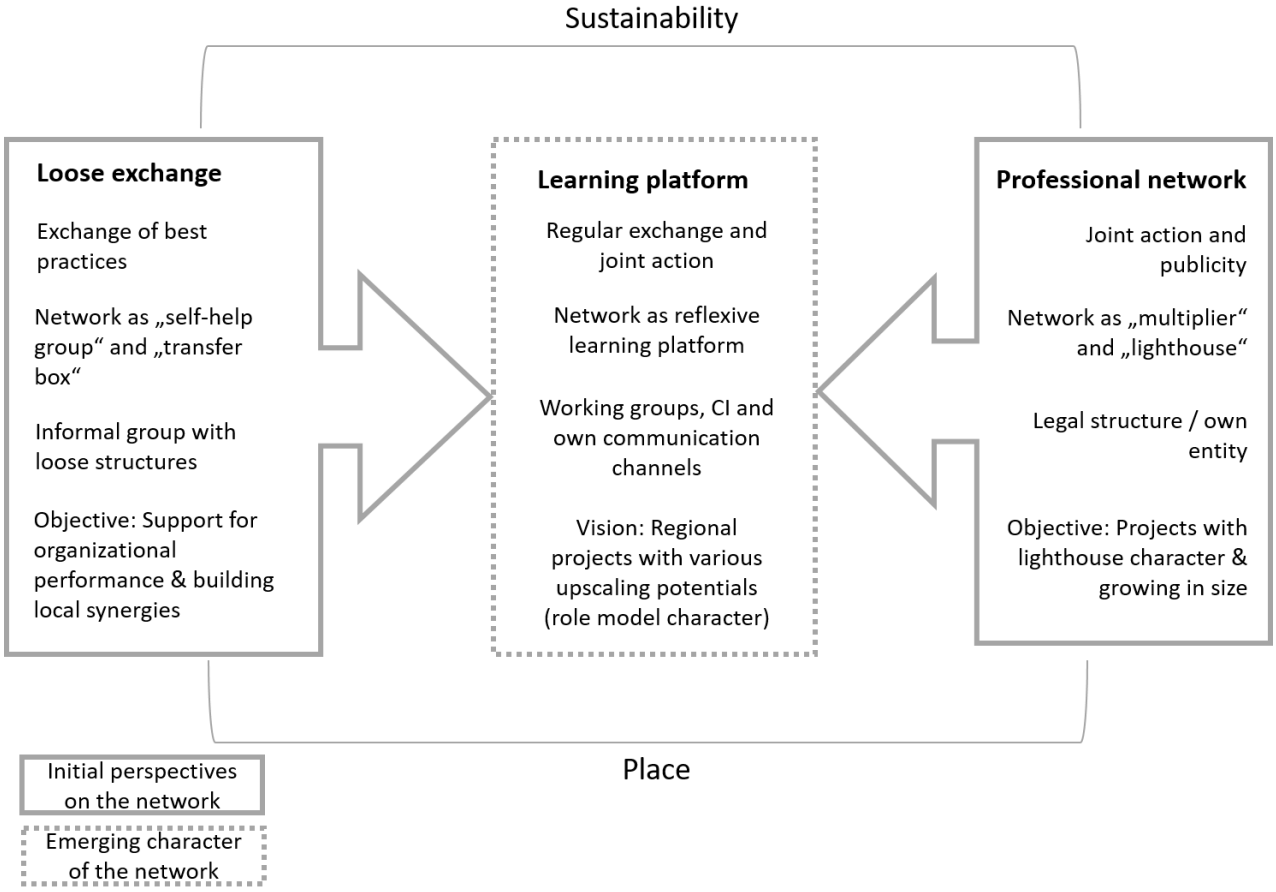

Fig. 4. The network as emerging learning and negotiation platform forming between a wide range of objectives and perspectives, here simplified as two opposing positions. Sustainability and place serve as common boundary objects between contrasting positions (own visualization).

Study period, data collection and roles of the researcher

The study period with the ZN³ ran from mid-2018 to mid-2021. During that time, data was collected through the participation in regular network meetings, taking interviews and hosting reflection sessions. Being a td project, the involvement of the researcher went beyond data collection and included functioning as a co-host and point of contact as well as the active participation in multiple working groups (Fig. 5). The work with the ZN³ and the trustful exchange with its members served as general basis for the research project and provided the

empirical data for research contributions two and three that are part of this dissertation (see Part II: Research Contributions). The project started in July 2018 with an introduction of the research topic and a discussion on the focus of the following project. From then on, all network meetings were co-organized, participated in and documented. Additional points of data collection included interviews that were conducted with all active members in September and October 2019, further short interviews taken with members and guests at the Sustainability Night, a mid-term presentation with a reflection workshop in February 2020 and a storytelling workshop with all participants in 2021. All points of data collection simultaneously served as either implicit or explicit reflection units, in which individual and group perspectives were brought to the surface and provided the basis for further negotiations. The final get-together with a presentation of the results and a reflection session in August 2022 was not part of the study period but an important milestone and wrap-up for the common learning journey. Referring to role descriptions in td research by Wittmayer & Schäpke (2014) that were further refined by Hilger et al. (2018), the research undertaken here was often closest to the role of the facilitator that initiates and facilitates learning processes, encourages expressions of all viewpoints and provides space for critical reflection. The active participation in the process, the co-organizing of interventions and the support in establishing structures sometimes went beyond facilitation and into the more proactive role of a change agent. Through the eyes of the reflective scientist, observations were continuously analysed and participation in activities were reflected upon in light of existing academic knowledge in order to produce not only context-specific but also transferable knowledge. As mirrored by the participants of the ZN³, having been part of the process and engaging in discussions made a difference to the atmosphere and the topics that were brought to the table. Negotiations were likely supported by the interview process as well as by reflection sessions, in which the

participants stated to find the reflection on their own role and visions for the network helpful and enlightening. Therefore, several interventions (ranging from interviewing to workshop settings) functioned as amplifiers of the general deliberation process. They supported deeper reflections and made positions explicit. The repeated initiation of reflections on the reflexivity of the network may have contributed to its actual reflexivity – a finding that supports an insight by (Beers & van Mierlo, 2017). But not only has it contributed to a reflexive practice of the network but also to a new self-awareness of the researcher, sparking repeated reflections on the own role in the process and on normative assumptions guiding this research.

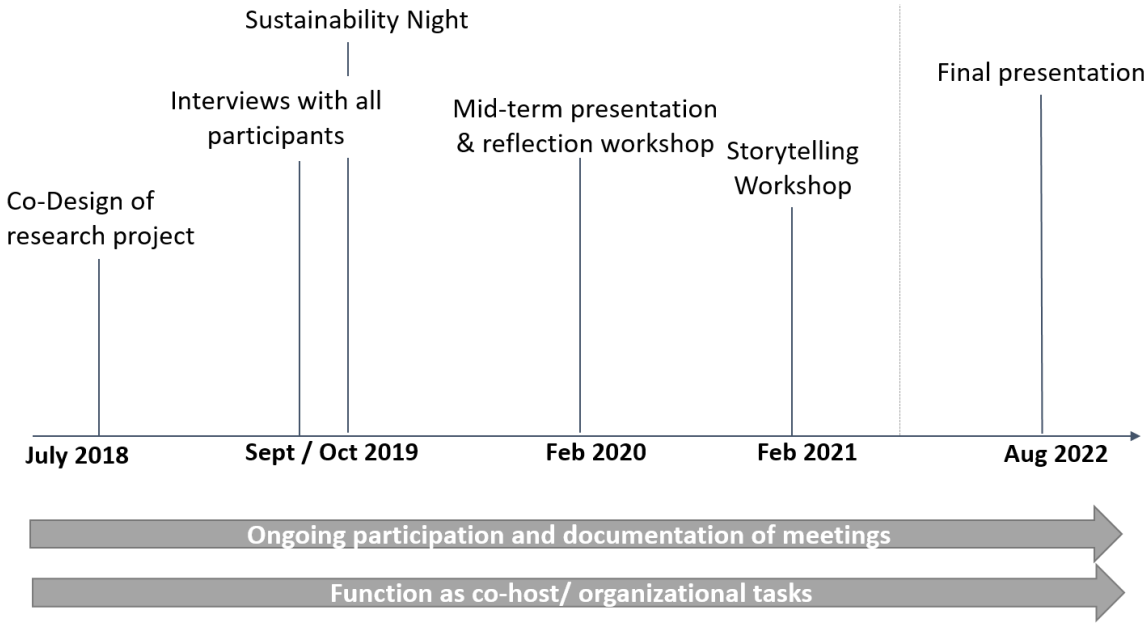

Fig. 5. Overview of the study period and major points of data collection (own visualization).

SYNOPSIS OF RESEARCH CONTRIBUTIONS

The articles that are core to this dissertation address the three research questions from different angles, each focusing on a different level of learning while drawing the link to the other levels (Fig. 6).

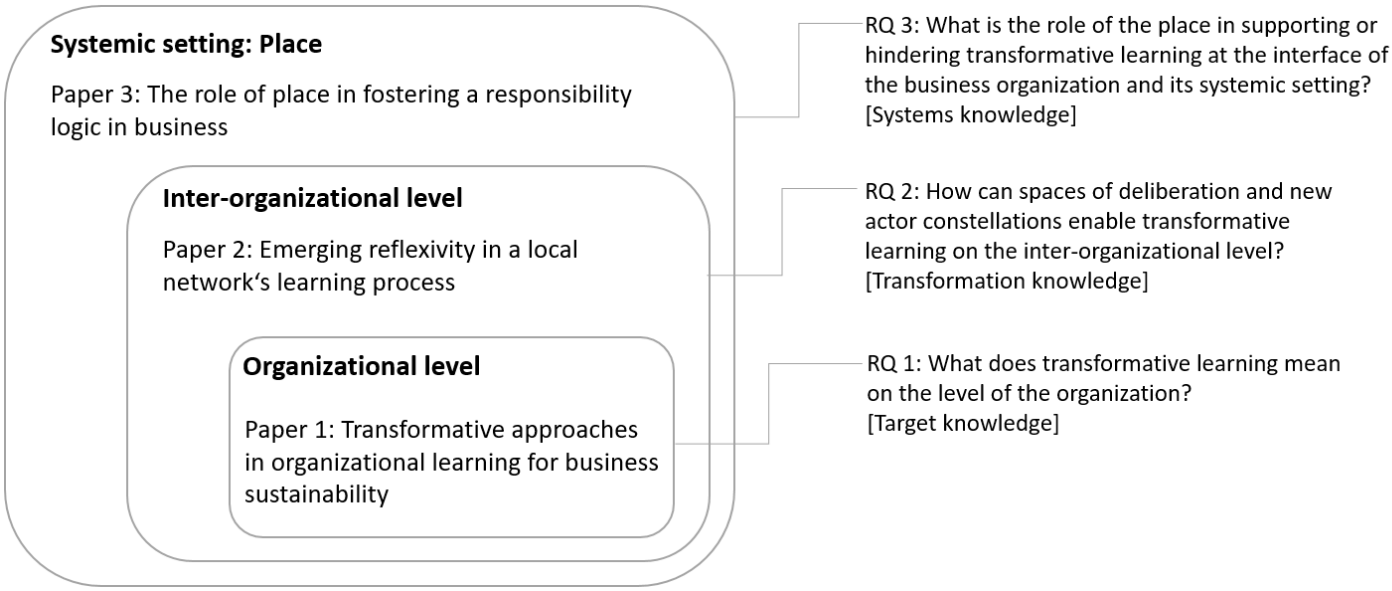

Fig. 6. Overview of the three research contributions by levels, each taking one research question into focus (own visualization).

The first contribution takes the organizational level into focus and summarizes the status quo of research at the interface of organizational learning and business sustainability. It addresses the first research question, asking for the characteristics of transformative learning on the organizational level. The knowledge produced in this contribution is mainly target knowledge as the existing literature is reviewed from a transformative lens, identifying those research contributions that have placed organizational learning into a wider systemic context and targeting a change in organizational perspectives vis-à-vis their systemic context. Core concepts employed are organizational learning on the one hand and the business

sustainability typology by Dyllick & Muff (2016) with a focus on their notion of a “true business sustainability”. The main contribution to the literature is a learning typology that mirrors the conceptual levels of business sustainability. Three transformative learning principles are identified that induce a next step towards a transformative orientation: A deutero learning mode, a societal learning scope and a cooperative advantage objective. The learning typology with the three transformative learning principles provides conceptual and practical leverage points for triggering transformative change processes in firms.

The second contribution is the core result of the transdisciplinary research process with the business sustainability network ZN³ over a three-year period of time. Addressing the second research question, it asks for the role of spaces for deliberation and new actor constellations in enabling transformative learning on the inter-organizational level. It draws on the theory of social learning to grasp the multi-actor context, the long-term research horizon, and the deliberative character of the learning process. The key concept employed is the notion of reflexivity, defined as the group’s orientation towards change in their systemic setting. The main knowledge type produced in this article is transformation knowledge as the transdisciplinary approach allows for in-depth insights into the processes fostering group dynamics and an emerging reflexivity in the group. The main contribution to the literature is the novel application of social learning theory to the reflexive learning journey of a business network and the comprehensive empirical data that emerged from the three-year study period. A key insight drawn from this research is that trustful relations, constructive conflict and joint action can produce reflexivity in a group but that these levers can – to a certain extent – be compensated for by professionalization and individual leadership. Although group dynamics decreased throughout the Corona pandemic, a transformative orientation at the

group level (internal reflexivity) and responses from the systemic setting (external reflexivity) increased further. A repeated reference to place played an important role in the groups' development and as subject to an increasing reflexivity.

The third research contribution assesses the interface between locally-rooted firms and the local context asking for the role of place in shaping organizational logics, thus addressing the third research question. It positions organizational change in a concrete setting: the geographical location that is loaded with symbolic meaning. The article adds to producing systems knowledge by zooming in to the levers that are to be operated in learning processes. It builds on the notion of logics as core to the co-evolutionary dynamic between the organization and the institutional context and gives consideration to the fact that the transdisciplinary research project was conducted with firms that are all traditionally rooted in the same location. It also picks up on insights of research contribution one and two, both of which point to the important role of place in the context of transformative learning processes. The article presents a typology of four different roles of place in shaping a firm's responsibility logic – the latter referring to a hybrid logic forming at the interface of different first level logics that the firm is confronted with in the context of sustainability challenges. A key insight from this research is that a sense of place does not only foster a sustainability orientation as suggested in former research but that it functions as a coping mechanism in handling potentially conflicting logics. Thus, the place may – in the short term - be part of a successful combination of logics and their integration into the core business but it may also allow for a decoupling of logics between the core business and local add-on activities. Despite this ambivalent role in the short-term, we suggest that in its function as a coping mechanism, the place can open up processes of organizational learning and transformation in the long term.

Table 1. Overview of the three research contributions by categories: type of research, research subject, research question, knowledge focus, core concepts as well as information on authorship and publication status.

No	Type	Research subject	Research question	Knowledge focus	Core concepts	Authorship	Status
1	Literature Review	Nexus of organizational learning & business sustainability	(1) Transformative learning on the level of the organization	Target knowledge	Organizational learning & True business sustainability	Co-author: Timo von Wirth (DRIFT, Rotterdam)	Published in Business Strategy and the Environment (2021)
2	Qualitative Study	Reflexivity & Learning in the case of the „Zukunftskreis Nachhaltigkeit Hoch 3“	(2) Transformative learning on the inter-organizational level	Transformation knowledge	Social learning & reflexivity	Single author	Under review for Sustainability Science
3	Qualitative Study	The role of place in changing corporate logics	(3) Role of the systemic setting - here the place - in transformative learning	Systems knowledge	Sense of place & Institutional logics	Co-authors: Karoline Augenstein & Alexandra Palzkill	In minor revisions for Business Strategy and the Environment

CONCLUSION

This dissertation project departed from the insight that pressing sustainability challenges require fundamental changes in societal systems and, in consequence, organizations. Focusing on business organizations as important reproducers of current economic institutional structures and their logics, this work aimed at further exploring mechanisms of profound change in organizational perspectives in the context of transformation processes. With the notion of transformative learning at their core, the three research contributions studied the research subject from different angles and at different levels of learning, each making unique contributions to the existing body of literature. Whereas research contribution one and three further elaborate on levers and objectives of transformative learning (systems and target knowledge), research contribution two zooms into a learning process to generate insights on the mechanisms behind reflexive learning on the inter-organizational level (transformation knowledge). The overall approach to this dissertation project was framed by the idea of a required reflexive governance to find adequate responses to the complexity of the sustainability challenges we are facing. New actor constellations and spaces for learning are key to grappling with problems that are not easily solved but that require process-oriented responses and the built-up of new institutions. Such an understanding of learning includes a new approach to scientific knowledge production. This dissertation emerged from an understanding of the researcher as part of a learning process and the insights presented might be seen as the inventory of learning outcomes that were produced during that time. They provide a point of departure for further research at the interface of learning theories and transformation research: Sticking with the specific case of the local business network ZN³, an empirical follow-up could zoom in to some of the organizational learning processes in

relation to the wider group learning process, thus elaborating on the feedback effect of an emerging group-level reflexivity on the organizational level. Another pathway could be a comparative study of further local networks and an emerging reflexivity in other geographical and institutional contexts. In relation to the latter, it would be interesting to zoom in further on place-specific factors that influence the role of place in shaping organizational logics as well as group-level reflexivity. In terms of practical implications, this research wants to make a case for initiating, promoting and ideally interlinking local learning platforms that provide spaces for deliberation and cross-sectoral learning. Also, the in-depth insights into the group learning process might provide inspiration for actors to open up to or to reflect on similar experiences. The main impact of this research, however, has ideally unfolded in the personal interaction with joint learners in the real-world laboratory Wuppertal, contributing its small share to the transformativity of the learning process on all sides.

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PART II: RESEARCH CONTRIBUTIONS

Paper 1: The nexus of business sustainability and organizational learning

Overview

Full title: The nexus of business sustainability and organizational learning: A systematic literature review to identify key learning principles for business transformation
Focus: An in-depth analysis of existing research at the interface of business sustainability and organizational learning from a transformative lens
Publication status: Published in Business Strategy and the Environment (2021) *24 citations by 05th September 2022*
Co-author: Prof. Dr. Timo von Wirth, Dutch Research Institute for Transitions (DRIFT) / Erasmus Universiteit Rotterdam
Own contribution: Identification of research question, research design, data collection and analysis, first manuscript draft, revisions (estimated to be 90%)

Abstract: Companies play a central role in the quest for sustainable development. Organizational learning theories have been utilized to explain sustainability-related change processes in firms. However, implications from studies at the nexus of business sustainability and organizational learning are highly dependent on varying conceptualizations. The objective of this study is to provide clarity on the plurality of conceptual underpinnings in research and to uncover principles that are associated with deeper organizational change processes, i.e. business transformation. Building on insights from a systematic literature review, we develop a sustainability learning typology, from which we distil three learning principles for business transformation: 1) the deutero learning mode 2) the societal learning scope and 3) the cooperative advantage objective. We formulate needs for future research to further elaborate on the learning principles associated with business transformation and suggest implications for practice.

Keywords: Sustainable development, business transformation, organizational change, resource-based view, typology

Main text

1. INTRODUCTION

Companies play a central role in the academic and societal debates around sustainable development (Schaltegger & Wagner, 2011). Scholars have suggested the need for substantial changes in organizational culture in order for firms to become more sustainable (Linnenluecke & Griffiths, 2009). Such changes are the outcome of evolutionary processes in organizational attitudes and responses (Hubbard, 2009). This evolution of business sustainability has increasingly been associated with processes of organizational learning (Molnar & Mulvihill, 2003, Fortis et al., 2018). The organizational learning concept has been identified as a promising lens to frame an organization's capability to process knowledge (Lee & Klassen, 2015) and to help understand the multidimensionality of sustainability-related change processes in firms (Fortis et al., 2018). Over the past two decades, organizational learning has been applied to theorize and analyse change processes related to sustainability efforts in firms and industries (Wijethilake & Upadhaya, 2020, Quartey & Wells, 2018). Concepts such as sustainability-focused organizational learning have become established (Dicle & Köse, 2014; Espinosa & Porter, 2011; Jamali, 2006; Molnar & Mulvihill, 2003; Toma, 2012). However, conceptualizations in literature dealing with the overlaps of business sustainability and organizational learning are diverse and underlying definitions of both concepts vary widely. While partly using the same terminology, sustainability in business refers to a range of organizational behaviours from legal compliance to stakeholder engagement all the way to transformative strategies. At the same time, organizational learning approaches are employed to describe processes varying widely in depth and transformative potential. The link between both concepts has been conceptualized in many different ways, making it

difficult for research and practice to work with the existing research base effectively (Fortis et al., 2018). While the original intention to bring both concepts together is to better understand "the transformation of business to sustainability" (Nattrass & Altomare, 1999, p. 5) and "the paradigm shift" (Molnar & Mulvihill, 2003, p. 168) associated with such a transformation, the transformative claim has varied widely in conceptual underpinnings. We thus identified the need to bring more clarity into the link between both concepts with a focus on learning principles associated with business transformation. We first conduct a systematic literature review of how concepts of business sustainability and organizational learning have been linked and studied in the past. For a consolidated overview, we then develop an ideal-typical typology at the nexus of both concepts from which we distil those learning principles that we find to be associated with business transformation. Our systematic literature review is guided by three questions regarding 1) the link between business sustainability and organizational learning (*why* bringing them together), 2) the different conceptualizations of sustainability-related learning (*what* is the learning subject), and 3) different learning dimensions (*how* is learning conceptualized). Our objective is to provide a tool and point of departure for future conceptual and empirical research concerned with business transformation. The next section is dedicated to the *theoretical underpinning and framework* of business sustainability and organizational learning. The *methodology* section provides an overview of methodological steps that lead us to *findings from the literature review & crafting a transformative learning typology* in the following section. Under *discussion* & *pathways for future research*, we discuss findings from the review and elaborate on the learning principles that we draw from our typology. We also critically reflect on our study and propose pathways for future research. The article closes with concluding remarks.

2. BUSINESS SUSTAINABILITY & ORGANIZATIONAL LEARNING: THEORETICAL UNDERPINNING AND FRAMEWORK

2.1 Business Sustainability (BST)

Over the past decades, the societal perception of the responsibilities of firms has broadened from a focus on its shareholders towards a wider group of societal stakeholders. Elkington (1994) introduced the widely received concept of the triple bottom line as a new business objective, thus broadening the understanding of the responsibilities of business beyond economic value creation. Further concepts such as corporate social responsibility, corporate citizenship, sustainable entrepreneurship and business ethics have been coined to refer to "a more humane, more ethical and more transparent way of doing business" (Van Marrewijk, 2003). Due to the plethora of concepts and applications, Lockett, Moon & Visser (2006) have described CSR research as "research field with highly permeable boundaries" (p. 117). Other scholars criticize sustainability-related concepts as being too broad in scope to be relevant for organizations (Banerjee, 2008). Firms have emphasized sustainability as a strategic goal (Bansal & Roth, 2000) but the effectiveness of responses in tackling sustainability challenges remained insignificant (De Lange, Busch, & Delgado-Ceballos, 2012). Understandings of corporate sustainability have too often focused on the business case (Dyllick & Hockerts, 2002, Ehrenfeld, 2012) and have too rarely taken into account larger human, social and global concerns (Banerjee, 2008, Landrum, 2017). Based on these insights, Dyllick & Muff (2016) criticize the academic debate for having failed in the past to "effectively inform management practice about sustainable development" (p. 158). In response to this criticism, they develop a typology in order to clarify the meaning of BST and to increase the potential of research to

effectively engage in business transformation. They distinguish three essential shifts in business that go along with different levels of BST: 1) a shift in the business concern, 2) a shift in the value created and finally 3) a shift in the organizational perspective (Table 1). It is this third shift in the organizational perspective from inside-out (i.e. how can we reduce the negative impact of what we do and how can we benefit from that?) to outside-in (i.e. which societal challenges are guiding our strategic decisions and how does the organization contribute to addressing them?) that they associate with serious internal change, i.e. with business transformation. We identified Dyllick & Muff (2016)'s framework as a useful guiding instrument for our objective to clarify the conceptual underpinnings of BST and to identify learning principles associated with a business transformation.

Table 1. Business Sustainability Typology with key shifts between the different levels of business sustainability (Dyllick & Muff, 2016)

Business Sustainability Typology	**Concerns**	**Values created**	**Organizational perspective**
Business-as-usual	Economic concerns	Shareholder value	Inside-out
Business Sustainability 1.0	**Three-dimensional concerns**	Refined shareholder value	Inside-out
Business Sustainability 2.0	Three-dimensional concerns	**Triple bottom line (stakeholder)**	Inside-out
Business Sustainability 3.0	Starting with existing challenges	The common good	**Outside-in**
Key shifts involved	**1st shift: Broadening the business concern**	**2nd shift: Expanding the value created**	**3rd shift: Changing the organizational perspective**

2.2.Organizational Learning (OL)

Cangelosi & Dill (1965) were the first scholars to introduce organizational learning to management. Since then, the concept has been applied in a wide variety of organizational contexts. Argyris & Schön (1978, 1996) define OL as a process in which the organization and its members change their behavior due to a change in underlying norms and values. However, they distinguish different types of *learning modes***,** in which a deeper revision of the underlying theory in use, i.e. the implicit reasons and assumptions underlying organizational behavior, only occurs in a learning mode that they refer to as double-loop learning. In contrast, more shallow learning processes stay at the level of error detection and correction, therefore remaining in a mode-one or single-loop learning mode. Drawing on Gregory Bateson (1958), Argyris & Schön (1978) introduce a third type of learning - *deutero learning* - as a form of higher order learning relative to the other two modes. It describes an organization's ability to constantly adapt to changing contexts, in other words its ability "to learn how to learn" (Argyris & Schön, 1978, p. 27). Senge (1990) has referred to the latter as the learning organization that "discover[s] how to tap people's commitment and capacity to learn at all levels" (Senge, 1990, p. 4).

A second dimension in OL research refers to different *levels or scopes of learning*. Many authors distinguish the individual from the organizational level and have varying views on how these two are interlinked or influence each other. Crossan, Lane, & White (1999) first introduced the often-applied "4I framework" presenting OL as four processes that connect the individual, the group and the organizational levels. However, Crossan et al. (1999) did not include learning processes that occur beyond organizational boundaries. In the context of learning for sustainability, Benn, Edwards & Angus-Leppan (2013) thus extended the

framework, stressing that learning at the individual and at the group level also occur in inter-organizational or networked Communities of Practice.

A third dimension in OL research focuses on the *learning objective*. OL in business is traditionally rooted in the resource-based view advocating knowledge as an organizational resource driving business performance (Belle, 2017). The resource-based view can be traced back to Penrose (1959) and to later works by Wernerfelt (1984) and Barney (1991). A central motivation of acquiring, managing and adapting knowledge is to get ahead of competitors. The central objective thus is achieving a competitive advantage.

2.3 Linking sustainability and organizational learning

Duarte (2017) traces back the trend of linking the concepts of sustainability and organizational learning to Meppem & Gill (1998) being among the first authors who examined learning processes used in organizations to enhance sustainability planning. Nattrass & Altomare (1999, p. 5) postulated that "the understanding and practice of the organizational learning disciplines will be the indispensable prerequisite of a successful transformation to sustainability". Molnar & Mulvihill (2003) then describe concepts of sustainability in business and organizational learning as parallel trends showing signs of increasing convergence. They coin the term "sustainability-focused organizational learning" (SFOL) and forecast that "SFOL appears to be gathering momentum as a catalyst for change" (p. 175). In the following decade, research on linking both concepts has increased under a variety of labels. Many authors draw on Molnar & Mulvihill (2003)'s "sustainability-focused organizational learning" (Dicle & Köse, 2014; Espinosa & Porter, 2011; Jamali, 2006; Toma, 2012), others refer to "sustainability-oriented organizational learning" (Müller & Siebenhüner, 2007; Siebenhüner & Arnold, 2007), environment-related organizational learning (Roome & Wijen, 2006) and environmentally-

oriented organizational learning (Zhu, Sarkis, & Lai, 2012). Not only labels but conceptualizations of BST and OL vary resulting in different ways to a) link both concepts, b) define BST as subject to learning and c) characterizing learning modes, scopes and objectives. Despite the many efforts to link business sustainability and organizational learning, a systematic consolidation is missing up to date. We are providing such a consolidation by first reviewing and analysing the existing literature, by secondly condensing our findings in a learning typology and by finally filtering out key learning principles for business transformation.

3. METHODOLOGY

We conducted a systematic literature review at the nexus of business sustainability and organizational learning research. The review was guided by the overarching research question how both concepts were linked in research to date. Based on this review, we developed a typology for sustainability learning in business. The typology allowed us to identify learning principles associated with business transformation. For the literature review, we broadly followed the research protocol by Luederitz et al. (2015) to identify the relevant literature (Table 2). We then analysed the identified set of articles using content analysis. First, we consulted two scientific databases: Web of Science as a broad research database and Business Source Ultimate by EBSCO as a management-focused database. Based on a previous scan of literature and a first search for relevant articles, the search string in both databases combined keywords connected to organizational learning ("*organizational learning*" OR "*learning organization*" OR "*corporate learning*" OR "*learning corporation*") and sustainability (“*sustainab* transition*” OR “*sustainab**" OR "*socio-ecologic**" OR "*corporate responsibility*" OR "*corporate social responsibility*" OR "*triple bottom line*" OR "*corporate*

environmentalism"). The first keyword search was reduced to title, keywords and abstracts of the articles published in academic journals and written in English language by April 2020. The search in Web of Science resulted in 264 articles, the search in Business Source Ultimate in 402 articles in total. 65 articles were duplicates within or between databases. The titles, abstracts and keywords of all articles were scanned regarding the explicit relevance of organizational learning and sustainability in the corporate and organizational context. In order to retrieve the articles relevant for further analysis, three selection criteria were applied: The articles needed to address the relevance of OL, the relevance of sustainability and the corporate context. Therefore, an article was excluded from the further analysis if either (1) organizational learning was only mentioned but not relevant for the study itself (e.g. organizational learning mentioned as potential outcome but not studied as a concept) or (2) sustainability was only mentioned but not relevant for the study itself *or* if it was conceptualized as economic sustainability only (e.g. "sustainable competitive advantage") or (3) the topic was too far away from the corporate organizational context (e.g. natural resource management in national parks). Amongst the excluded articles, 57 articles did not fulfil any of the three criteria at first sight and were dismissed immediately. Of all others, many dealt with organizational learning as a concept but treated sustainability from an economic perspective only, which was not sufficient to be taken into account. Fewer articles were sorted out because of the missing conceptualization of organizational learning that only mentioned OL (e.g. as one potential outcome or as suggestion for further research) without analysing it further. Other articles were excluded because of the missing link to the corporate context.

Of all articles excluding duplicates, 99 articles were identified as relevant for further in-depth analysis. Using snowball-technique, three additional articles were identified as relevant during the analysis and added to the list. At the same time, 17 articles were excluded after

this second round of analysis, as they did not fulfil the above-mentioned criteria after all. Of all 85 remaining articles, 26 were of conceptual nature, and 59 conducted empirical studies. Of the latter, a total of 22 employed quantitative methods, 30 employed qualitative methods, and 7 employed a mixed methods approach. The most represented journals were *Business Strategy and the Environment* and *Learning Organization* (7 articles each) followed by the *Journal of Cleaner Production* (6 articles), the *Journal of Business Ethics* (5 articles) and *Sustainability* (4 articles) as well as by *Management Decision*, *Management Learning* and *Organization & Environment* (3 articles each). The content analysis of the 85 articles was based on the full article and guided by our three research questions concerning 1) the rationale for linking BST and OL (*why* bringing both concepts together), 2) conceptualizations of business sustainability (*what* is the subject of learning) and 3) different learning dimensions (*how* is learning conceptualized). For the conceptualization of BST we employed Dyllick & Muff (2016)'s typology as a guiding framework. For the conceptualization of OL we considered three key dimensions as identified earlier in the literature: the learning mode, the learning level and the learning objective.

Table 2. Overview of review process

Steps	Procedure	Results
1. First literature research	First (unsystematic) search of literature at the nexus of BS and OL	Identification of useful frameworks & keywords for further analysis
2. Data gathering	Database search on Web of Science and Business Ultimate	597 potentially relevant articles excluding 65 duplicates
3. Data screening	Review of titles and abstracts guided by the questions: 1) Does the organizational/business context play a role? 2) Is business sustainability applied as a concept? 3) Is organizational learning applied as a concept?	99 articles identified as relevant for further analysis
4. Data scoping	Download of all papers classified as potentially relevant	99 articles downloaded in full text
5. Paper classification	Screening of potentially relevant articles according to guiding questions in 3., to clarify whether or not the article serves the study purpose.	85 articles left for further analysis after sorting out 17 more and taking on three via snowballing
6. Paper review	Analysis of papers classified as relevant guided by the questions: 1) What is the rationale for bringing both concepts together? 2) How is business sustainability conceptualized? 3) How is organizational learning conceptualized?	Matrix of dataset with 20 review categories
7. Content analysis	Each if the questions under 6. were assessed in depth by use of various sub-categories. Sub-categories were defined based on our initial literature review and the frameworks as described in the theory section	Final dataset of 85 analyzed articles (described further under findings)

In a second step of analysis, we built on the findings from the literature review by conceptualizing a sustainability learning typology extending Dyllick and Muff (2016)'s business sustainability typology with an OL perspective. Our aim was to provide ideal-typical categories, i.e. "distinct characterizations of a particular meaning scheme" (Fuenfschilling & Truffer, 2014, p. 777) that allowed us to condense the variety of sustainability-related learning conceptualizations found in the literature. A second objective was to further unpack the link between conceptualizations of BST and OL, showing that shifts in the business concern, the organizational perspective and the values created are associated with shifts in learning modes, learning scopes and learning objectives. Finally, sorting our findings into this learning-extended version of the business sustainability typology allowed us to identify those learning principles that we found to be associated with the third shift in BST, i.e. with business transformation.

4. FINDINGS FROM LITERATURE & CRAFTING A TRANSFORMATIVE LEARNING TYPOLOGY

First, we present the findings from our systematic literature review in direct reference to the three guiding research questions (Table 3). In a second step, we present our sustainability learning typology and identify those principles that we found to be associated with business transformation.

Table 3. Overview of content analysis with main categories, sub-categories, codings and exemplary references

Main categories of analysis	**Description of link between BST & OL**		**Conceptualization BST (Framework: Dyllick & Muff, 2016)**			**Conceptualization OL (Framework: Modes, levels & objectives of learning)**		
Sub-categories	*Label*	*Relationship*	*Broadened Business concern*	*Expanded value created*	*Changing organizational perspective*	*Learning modes (Argyris & Schön, 1996)*	*Learning levels (Crossan et al., 1999)*	*Learning objectives (Barney, 1991)*
Coding/ Keywords	References to BST-related learning	Description of link between both: e.g. trigger, relationship, link, mutual, precondition, capability	BST as driver of economic performance: e.g. financial performance; competitiveness	BST as integration of: e.g. stakeholder, new forms of capital, triple-bottom-line	BST as changing logics: e.g. addressing societal challenges; global responsibility; solving sustainability challenges	Single-loop learning, double-loop learning, deutero learning	Individual, organizational, inter-organizational, societal learning	Resource-based view; competitive advantage, cooperative advantage
Example references	Environment-related learning *e.g. Roome & Wijen, 2006* Sustainability-focused organizational learning *e.g. Molnar & Mulvihill, 2003* Societal learning *e.g. Cruz et al., 2006*	OL as precondition *e.g. Leonidou et. al., 2015, Lozano, 2014* BST as direction e.g. Duarte, 2017, Kasim, 2015) Mutually reinforcing e.g. *Jamali, 2006, Manring & Moore, 2006)*	Increasing financial performance *e.g. Lee & Klassen, 2016, Velazquez et al. 2011* Increasing competitiveness *e.g. Oelze et al., 2016, Zollo et al., 2013, Kim & Han, 2012*	Integrating stakeholder concerns *e.g. Zhang & Zhu, 2019, De Palma & Dobes, 2010* Integration of the triple-bottom-line *e.g. Wilson & Beard, 2014; Pourdehnad & Smith, 2012*	New sustainable logic *(Cruz et al., 2006)* Responding to societal challenges *(Siebenhüner & Arnold, 2007)* Global responsibility *(Berthoin Antal & Sobczak, 2004)* Addressing the risk of system collaps *(Cantino et al., 2017)*	From single- to double loop learning *e.g. Richards & Zen, 2016; Cramer, 2005* Deutero learning *e.g. Langenus & Dooms, 2018, Manring & Moore, 2006*	From intra- to inter-organizational *e.g. Zou et al., 2019, Borghei & Magnusson, 2018, Oelze et al., 2016, Arya & Salk, 2006* Societal learning scope *e.g. Martinuzzi & Krumay, 2013, Cruz et al. 2006, Berthoin Antal & Sobczak, 2004*	Competitive advantage *(Kim & Han, 2012)* Cooperative advantage *(Cantino et al., 2017)* Learning networks *(Manring, 2007)* Transformation of societal values *(Martinuzzi & Krumay, 2013)*

4.1 Findings from the systematic review

4.1.1 The relation between BST and OL

From all articles we reviewed, we identified three prevalent perspectives on the relation between BST and OL. The first perspective refers to *OL as a precondition for sustainability in firms* (e.g. Jamali, 2006, Leonidou et al., 2015, Lozano, 2014, Neale, 1997). They postulate a "proper learning context" (Espinosa & Porter, 2011, p. 64) or an organization "skilled at creating, acquiring, and transferring knowledge" (Puplampu & Dashwood, 2011, p. 476) as antecedents of BST. Learning and development processes are described as key on the path towards sustainable development (Müller & Siebenhüner, 2007). Jamali (2006) describes the intentional use of learning processes and the adoption of characteristics of a learning organization as essential preconditions for improving sustainability performance and Leonidou et al. (2015) see OL as organizational capability driving environmental performance. The second perspective refers to *sustainability as catalyst and direction for OL* (e.g. Sambasivan et al., 2013, Kasim, 2015, Duarte, 2017). For Siebenhüner & Arnold (2007, p. 341-342) sustainability serves as "guideline for the direction of the learning and change process". For Gond & Herrbach (2006, p. 359), organizational reporting about social responsibility can serve as "learning tool". Tollin & Vej (2012, p. 626) frame sustainability as presupposing OL, as it generates new products and processes that challenge existing values and practices. Duarte (2017, pp. 4-5) refers to sustainability learning as "specific type of organizational learning that involves the systematic and continuous creation of knowledge to ensure the responsible management of natural resources". Zhang & Zhu (2019) find OL to result from stakeholder pressure towards green innovation and product development. The third perspective sees *OL and BST as mutually reinforcing*. Molnar & Mulvihill (2003, p. 172) describe "the integral link between the two streams of activity [as] both require a challenge

to mental models, fostering fundamental change, engaging in extensive collaborative activity and, in some cases, revisiting core assumptions about business and its purpose". For Jamali (2006, p. 814), the basic ingredients of OL, i.e. "an openness to change and the conception of change as a profound evolutionary process", are the same ingredients needed in business sustainability and need to be nurtured. Accordingly, Manring & Moore (2006, p. 896) state that "sustainable development practices and organizational learning theory have an important objective in common: to achieve a state of generativeness of the system or organization [that] requires a new paradigm of consensus building through collaboration".

4.1.2 Conceptualization of business sustainability

The analysis showed a variety of framings for business sustainability. Many articles refer to corporate social responsibility (CSR) (Cruz & Pedrozo, 2009; Burchell & Cook, 2006; Carter, 2005; Godkin, 2015; Trong Tuan, 2013; Zou et al. 2019). Often used in combination with the CSR approach is the triple bottom line concept (e.g. Langenus & Dooms, 2018; Wilson & Beard, 2014; Pourdehnad & Smith, 2012). Furthermore, the plurality of concepts ranges for example from corporate responsibility (Li & Toppinen, 2011) and corporate sustainability (Grewatsch & Kleindienst, 2018; Iarossi et al., 2011) to a more ecological focus in environmental management (Kasim, 2015; Kim & Han, 2012; Roome & Wijen, 2006). While Antal & Sobczak (2004, 2014) refer to a global responsibility of the firm, Karadzic, Antunes, & Grin (2013) draw on resilience research and Cantino et al. (2017) frame their research with a commons perspective. Assessing conceptualizations through the lens of Dyllick & Muff (2016)'s framework, the majority of articles frame BST from an *inside-out* perspective. While some define it in light of a broadened business concern that can increase financial performance and competitiveness (Blackman, Kennedy, & Quazi, 2013; Kim & Han, 2012; Lin,

2012; Tollin & Vej, 2012; Velazquez et al., 2011), others focus on an extended value creation by referring to the importance of stakeholder dialogue and stakeholder integration (Dashwood, 2012; De Palma & Dobes, 2010; Li & Toppinen, 2011; Pourdehnad & Smith, 2012) or to "boundary-spanning activities" (Hoffmann, 2007). Cavaleri & Mc Elroy (2013) stress the need "to broaden the scope of organizational obligations to include consideration of all of an organization's stakeholders, and all of the capitals they rely on for their well-being – not just those directly related to an organization's finances" (p. 13). Cruz, Pedrozo & Estivalete (2006) focus on a required shift in the organizational perspective in form of a "transition process from a financial-economic logic to a sustainable logic" (p. 881) that "create[s] a movement of change in society as a whole" (p. 887). They refer to the need for an outside-in perspective as they state that "a basic question for reflection emerges: Do organizations today exist to satisfy individuals' and societies' objectives as a whole, or do individuals and society exist as a whole to allow for the reaching of organizational objectives? This kind of question leads to a reflection about the role that the organizations perform in society" (p. 878). The central concern is solving societal challenges and the organization is seen as a vehicle to do so. Likewise, Martinuzzi & Krumay (2013) postulate that a firm with a transformational CSR approach potentially contributes to a transformation of economic and political framework conditions and Siebenhüner & Arnold (2007) see firms in the responsibility to address societal challenges with their business approach.

4.1.3 The different learning dimensions and their characteristics

When considering learning modes, a key reference is the seminal work of Argyris & Schön (1978, 1996) and their different modes of learning (single-loop, double-loop and deutero learning) (Banerjee, 1998; Cruz & Pedrozo, 2009; Cruz et al., 2006; Cramer, 2005; Karadzic et

al., 2013; Nybakk & Panwar, 2015; Richards & Zen, 2016; Toma, 2012). Scholars seem to agree that learning related to sustainability requires a double-loop learning mode in order for organizational values and norms to adjust to new challenges. However, the depth of learning, i.e. the values that are to be adjusted in a double-loop process, is dependent on assumptions concerning the required shift. Some authors describe double-loop learning more functionally as everyday practice of (new) procedures, potentially supported by employee training and coaching (Sambasivan et al., 2013) or as the outcome of local experimentation and testing (Espinosa & Porter, 2011). Others stress the need for a higher order learning on the organizational level, i.e. the ability "to learn how to learn" (Argyris & Schön, 1978, p. 27). Puplampu & Dashwood (2011, p. 477) for example define learning as "ongoing, dynamic process requiring the ability to adapt to evolving societal expectations and norms".

Focusing on the learning scope, many articles in this review stick to the traditional scope of learning within organizational boundaries. However, scholars also include inter-organizational collaboration into their assessment but mostly see them as triggers for learning processes on the organizational level. Examples here include stakeholder engagement (Burchell & Cook, 2006, Oelze et al., 2016) and inter-firm relationships (Arya & Salk, 2006; Lin, 2012; Zou et al., 2019), from which organizations learn (individually). Manring & Moore (2006), Manring (2007) and Langenus & Dooms (2018) go further in framing inter-organizational networks (IONs) as inter-organizational learning entities in the North Carolina textile industry, in sustainable local ecosystem management, and in the European ports industry respectively. Similarly, Cantino et al. (2017) move the learning focus from within to between organizations with their "cooperative advantage" concept (see learning objectives) in local fishery. With respect to the learning objectives, a prevalent framing related to learning objectives is the resource-based view (RBV), seeing sustainability knowledge as an

organizational resource driving competitive advantage (e.g. Belle, 2017; Carter, 2005; Zhang et al., 2018; Bilan et al., 2020). Yang & Park (2016) conclude that from a competitive standpoint, external knowledge exchange negatively impacts a firm's achievement of sustainable innovation. In contrast, Zollo, Cennamo & Neumann (2013, p. 244) criticize the instrumental logic of the RBV, stating that learning for sustainability has to go beyond motivations of competitive advantage. Cantino et al. (2017, p. 3-4) take on a similar perspective, studying fishery from a commons perspective. In the face of sustainability challenges they warn that "outperforming all competitors may become a useless achievement". They in turn suggest the need for a new objective of "cooperative advantage" that will help in tackling those challenges that no business alone can solve.

4.2 Crafting a transformative learning typology

Drawing on the three learning dimensions, we developed a sustainability learning typology extending Dyllick & Muff (2016)'s business sustainability typology (Table 4). With this ideal typical abstraction we further unpack the link between conceptualizations of BST and OL. From our literature review we found both concepts to be strongly interrelated – different foci on required shifts in business (concern, value, organizational perspective) went along with similar conceptualizations of OL (mode, levels, objectives). From a learning perspective, we see a first shift in the learning mode as most authors conceptualize learning even in very early stages of business sustainability as going beyond correction and error. We see a second shift in the learning scope, moving away from organizational centricity and including learning across organizations. In the third shift, the learning objective switches from a deeply rooted logic of competitive advantage to one of cooperative advantage. This fundamental shift goes along with further development in the other dimensions, i.e. the societal learning scope and

a deutero learning mode. It is on this third level of our learning typology that we move away from “sustainability-focused organizational learning” to what we call “transformative learning”. The three principles of transformative learning (*cooperative advantage, societal learning scope and deutero learning mode*) are strongly associated with the third stage in business sustainability, i.e. with business transformation.

Table 4. Moving beyond Dyllick & Muff (2016)'s Business Sustainability Typology towards a Transformative Learning Typology

Business Sustainability Typology	**Concerns**	**Values created**	**Organizational perspective**	**Learning outcome**	**Learning scope**	**Learning mode**	**Sustainability Learning typology**
Business-as-usual	Economic concerns	Shareholder value	Inside-out	Competitive advantage	Intra-organizational	Single loop	**Reactive/ Compliance**
Business Sustainability 1.0	Three-dimensional concerns	Refined shareholder value	Inside-out	Competitive advantage	Intra-organizational	**Single-/ Double loop**	**SFOL 1.0**
Business Sustainability 2.0	Three-dimensional concerns	Triple bottom line (stakeholder)	Inside-out	Competitive advantage	**Inter-organizational**	**Double loop**	**SFOL 2.0**
Business Sustainability 3.0	Starting with existing challenges	The common good	Outside-in	**Cooperative advantage**	**Societal**	**Deutero**	**Transformative**
Key shifts involved	**1st shift: Broadening the business concern**	**2nd shift: Expanding the value created**	**3rd shift: Changing the organizational perspective**	**3rd shift: Changing the learning objective**	**2nd shift: Expanding the learning scope**	**1st shift: Switching the learning mode**	**Key shifts involved**

5. DISCUSSION & PATHWAYS FOR FUTURE RESEARCH

5.1 The link between of business sustainability & organizational learning

We found three prevalent types of linking business sustainability (BST) and organizational learning (OL). The link between the two strongly depends on the specific conceptualizations of BST. Those describing *OL as a precondition* for sustainability in business, view sustainability as one "trend" that is being taken up amongst others, therefore mostly employing a definition of BST as the need to widen the business concern. When BST is framed as directionality for OL, it follows that the higher the ambition towards business transformation, the deeper the effect of the sustainability-related learning process in changing deeply-rooted norms and values. Finally, scholars perceiving *BST and OL as being mutually reinforcing* provide the most dynamic description: This perspective takes the assumptions of the former two as a given: that a general responsiveness as well as normativity underlying sustainability-related change processes are necessary preconditions. It is focusing on the co-evolutionary dynamic between the two, thus providing a description of how we perceive our learning typology. Change processes do not work out as one-time shifts from one "stage" to the next but changes might be more subtle: a shift in one of the columns (that each resemble a continuum in reality) might make way for another shift in one of the others. Adding the learning dimension to the BST typology therefore provides a more detailed frame of analysis for research and practice on BST: An evolution in business sustainability is inevitably connected with shifts towards novel ways of organizational learning. A higher level of business sustainability will not be reached, if there is not enough responsiveness on the learning end. On the other hand,

learning is not an end in itself but it is interlinked with a normative direction, in this case those norms and values interlinked with each of the business sustainability levels. As we found most articles to refer to BST from an inside-out perspective, the directionality of learning in the articles reviewed is one of widening the business concern and increasing stakeholder engagement. It is mostly not a transformative one in the sense of aiming for a shift in organizational perspectives and a proactive response to sustainability challenges. However, it is especially such a transformative perspective that we are trying to understand with the three learning principles for business transformation that we distil from our typology.

5.2 The three learning principles accompanying business transformation

The different learning stages we identified in our typology are ideal typical abstractions. From a conceptual point of view, these categories provide the vantage points for further investigation. From an empirical point of view, making principles explicit can help to assess organizational shifts along the BST continuum. It may also help to find more detailed leverage points to trigger transformative change processes in business. The learning principles we identify as going along with business transformation - a deutero learning mode, a societal learning scope and a cooperative advantage objective – can play an essential role here. These principles encompass the ones on lower learning levels, i.e. deutero learning is meant to facilitate double-loop learning, a societal learning scope encompasses learning at the organizational as well as the inter-organizational levels and a cooperative advantage does not exclude the occurrence of competitive advantage. We will discuss the different principles more in detail in the following.

(1) Considering 'Deutero learning', scholars have argued for quite a while for the benefits of the learning organization. Senge (1990) points out early on that sustainability is fostered through "a culture that embraces and fosters learning" (p. 535). While this finding does not come as a big surprise, we find it important to stress the relevance of directionality in this context. Generally, modes of learning such as double-loop and deutero learning do not imply a learning direction. It is only in relation with the normative positioning that learning can develop its transformative potential. To that end, the learning mode is directly related to the scope and objective of learning. Whereas some sort of responsiveness to societal changes is given also at lower levels of business sustainability, it is in connection with a societal learning scope and a cooperative advantage logic that learning how to learn can support truly sustainable outcomes. In this context, deutero learning refers to an explicit responsiveness of an organization that not only adapts to but that actively takes on sustainability challenges in its environment.

(2) Regarding the 'societal learning scope', firms are part of a larger context and no individual organization can become more sustainable while ignoring their economic, environmental and social contexts (Loorbach & Wijsman, 2013). A central finding from our literature review is that relationships beyond organizational boundaries (networks, alliances, partnerships) are often referred to as an important source of acquiring knowledge, yet, the learning processes and outcomes are still conceptualized within the scope of the individual organization. Those that do conceptualize learning at the inter-organizational level mostly consider geographically distinct ecosystems or industry sectors, thus stressing the role of geographical

proximity as to be found in studies of collaboration e.g. in industrial ecology (e.g. Walls & Paquin, 2015) or local innovation ecosystems (Granstrand & Holgersson, 2020). Few articles make the interconnection between business organizations and their societal context explicit. As Cruz et al. (2006) argue from an evolutionary perspective, a managerial strategy can be seen as a social practice that evolves, shapes and is shaped by the values, norms and logics that exist inside and outside organizational boundaries. Hence, a societal learning scope makes explicit the idea of co-evolutionary change and suggests a shift in the firm's awareness to its systemic context. This includes concerns of macro-level changes and planetary boundaries (Whiteman, Walker & Perego, 2013) as well as considering a much larger group of stakeholders than traditional stakeholder theory suggests (Schaltegger, Hörisch & Freeman, 2017).

(3) The 'cooperative advantage objective' goes far beyond striving for more cooperation. It addresses a fundamental shift in logics underlying business practice. We found that in the majority of articles sustainability learning is aiming for the competitive advantage of the individual organization rather than jointly striving for a more systemic objective. As described under learning scope, inter-organizational cooperation is a relevant concern, however, cooperation is mostly framed as a useful tool for transferring knowledge and best practices. Rooted in the traditional resource-based view, the motivation for sustainability-related learning is outperforming competitors. Opposing such a competitive viewpoint in light of systemic sustainability challenges, Cantino et al. (2017) suggest a re-framing of the triggering mechanism for sustainability learning being cooperation and the outcome being a *cooperative advantage*. As shown in our typology (Table 4), the shift in learning objectives from

competition to cooperation is complementary to the one in the organizational perspective: both cases require a shift from an organization-centred viewpoint (i.e. the organization engages in cooperation to gather knowledge for internal processes) to a systemic viewpoint (i.e. the organization engages in cooperation as part of a larger systemic entity). The framing of cooperative advantage can still be regarded as a resource-based view but as a redefined version: one of the resources is cooperation, and knowledge sharing is aimed at thriving in a highly complex world full of challenges that are not to be solved by single organizations. Such a shift in logics includes a mental re-positioning of the organization, now defining itself as part of a web of collaborators pursuing a common objective. A step that seems indispensable for effective transformative action.

5.3 Limitations and pathways for future research

We set out to consolidate key principles at the nexus of BST and OL. A systematic literature review provided the ground for crafting a learning typology as an extension to Dyllick & Muff (2016)'s BST framework. We consider this typology as a useful heuristic to approaching the link between BST and OL. Nevertheless, it is important to keep in mind its ideal-typical character. First, while the typology is organized in distinct categories for the sake of simplification, framings in research and in business practice are less clear-cut and rather need to be pictured along a messy continuum. The same is true for Dyllick & Muff (2016)'s framework that we have built upon. While it served as a useful instrument for this work, we do see the limitations of this framework. For example, it brings up the question of when a "societal challenge" classifies as such so that addressing it truly qualifies as shift in organizational perspectives. In line with

Aggerholm & Trapp (2014) we hence call for critical reflection of static frameworks, when addressing dynamic shifts in business sustainability. We see our novel contribution in identifying key learning principles for shifts in organizational perspectives, i.e. business transformation. By this, we hope to provide a starting point for further conceptual debate and empirical analysis. For example, it appears relevant to study business research but also business practice for the concrete underlying learning mechanisms, triggers and structures that enable these particular types of learning in a business (ecosystem) and in relation to the different BST levels. Furthermore, in this study we focused on the specific learning theory of organizational learning as an established approach in organizational and management studies. As there do exist further learning theories, it seems promising to conduct a similar analysis with other fields of learning research, for example drawing on social learning theories. In the following, we suggest three additional avenues for future research to enrich the understanding of the identified learning principles for business transformation.

5.3.1 Local learning structures beyond organizational boundaries

We found shared local ecosystems to be a common denominator when conceptualizing learning beyond organizational boundaries. The notion of cooperative advantage (Cantino et al., 2017) as well as studies on learning networks (Manring & Moore, 2006) referred to the collaborative management and learning processes in shared resource bases. Transferring insights from these studies to the shared socio-geographical context, the role of place may be further taken into account. Scholars have pointed to the positive effect of place attachment on sustainability orientation

in firms (Shrivastava & Kennelly, 2013). Future research could address the particular role of place as a catalyst for a local learning environment that firms feel attached to and responsible for. Places may function as "boundary objects" (Benn et al., 2013) for local collaboration. Studying transformative learning effects in local collaboration and networks could entail formal and informal business networks, cross-sector alliances as well as inter-organizational communities of practice.

5.3.2 Further unpacking fundamental shifts – the role of institutional logics

We also suggest to complement research at the nexus of BST and OL with an institutional logics lens, adding more explanatory power to "*what* is the subject of learning" from a systemic perspective. We found that references to double-loop learning in sustainability-related processes are widespread. However, the actual degree of changing the theory in use depends on the aspired level of sustainability. Building on Cruz et al. (2006) who refer to a required shift in the organizational perspective as "transition process from a financial-economic logic to a sustainable logic" (p. 881) we see a need for further research on the dynamics in corporate missions. For example, Laasch and Pinkse (2019) recently provided insights about processes of integrating a new "responsibility logic" into the dominating commercial logic in business. Thus, we see synergy potentials when combining a learning perspective on BST with studying shifts in institutional logics. It would be interesting to especially draw on types of businesses that start out with a logic other than the dominant commercial logic, such as social enterprises (that by definition take on an "outside-in" perspective), sufficiency-based companies and non-growing firms.

5.3.3 Understanding co-evolutionary dynamics: Drawing on transition theory

The learning principle of 'societal learning scope' includes the idea of a co-evolutionary dynamic between societal and organizational change. Companies that are aware of this dynamic are much more capable of responding to societal change and to proactively engage in change. Loorbach & Wijsman (2013) refer to such businesses as "frontrunner businesses" (p. 23) for societal transitions. We see a more systemic framing of the nexus of BST and OL in light of co-evolutionary change processes as a promising pathway for better understanding the role of business in sustainable development. Scholars from the field of sustainability transition research have likewise identified the need to integrate learning theories, in particular organizational learning, into their studies of business sustainability transitions (Van Mierlo & Beers, 2020).

6. CONCLUSION

In this study, we presented a typology for sustainability learning and distilled three learning principles associated with business transformation: A deutero learning mode, a societal learning scope and a cooperative advantage objective. While we see the contribution of our study as being in the conceptual realm of research, we conclude with implications for research and practice. The learning typology with the three transformative learning principles provides leverage points for triggering transformative change processes in firms: by implementing structures and platforms for continuous learning and reflection within and across organizational boundaries (deutero learning), by explicitly re-framing managerial strategy as practice that evolves, shapes and is shaped by the values, norms and logics that exist inside and

outside the organization (societal learning scope) and by actively seeking collaboration and reframing it as an invaluable resource for jointly thriving in addressing sustainability challenges (cooperative advantage objective). There remains a need to further investigate the incentives and structures that can foster the implementation of measures associated with transformative learning in firms.

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Paper 2: Reflexivity as transformative orientation

Overview

Full title: Reflexivity as transformative orientation: Insights into the learning journey of a local business network

Focus: A transdisciplinary study over three years applying social learning theory and monitoring the emerging reflexivity as a proxy for transformative learning on the inter-organizational level.

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Abstract: This article is following up on recent work relating the concepts of reflexivity and learning in sustainability transition research. It presents key insights from a three-year transdisciplinary research process with a local business network in the Western part of Germany, monitoring its emerging and shifting transformative orientation over time. The process included participation in meetings, interviews and interventions. Major reflexivity turns, defined as changes across discourse, relations, practices and action, were identified and analysed in four learning phases. Trustful relations, constructive conflict and joint action were found to foster the emergence of internal reflexivity in the beginning, while in the later phase of the study period, decreasing overall group dynamics were compensated for by professionalization and individual leadership. The study adds to further exploring the role of reflexivity in learning processes in the context of transitions research and sheds a new light on local business networks as transition initiatives in the making.

Keywords: Reflexivity, learning, business, network, transdisciplinary, place

Main text

1. INTRODUCTION

Building on Beck et al. (1994)'s seminal work on reflexive modernization, sustainability challenges have been argued to be amongst the main second-order challenges of modernist problem solving (Voß & Kemp, 2006). Tackling these challenges requires new forms of problem framing and solving. Instead of managing for specific outcomes that will produce more unintended side-effects, new approaches are sought to open up spaces for negotiation (Augenstein et al., 2020) and social learning (Beers et al., 2016). From an evolutionary perspective, spaces for change emerge in processes of human interaction and communication. In shared discursive spaces, wider discourses enter the interaction through actors' mindsets, are re-negotiated, altered and newly formed (Leeuwis & Aarts, 2011). Especially in the context of sustainability challenges, social learning has been referred to as key supporting process (Woodhill, 2010). Transition scholars repeatedly mention learning to play an essential role in sustainability transitions (e.g. Kemp et al., 2007, von Wirth et al., 2019), yet learning has for a long time received little deeper conceptual or empirical attention (van Mierlo et al. 2020). Therefore, learning has often remained a buzzword without further conceptualizing the dynamics and outcomes of learning. A rather recent stream in sustainability transition research has formed to fill a gap in better understanding the role and mechanisms of learning in transitions processes (van Mierlo et al., 2020). In that context, Beers & van Mierlo (2017) first study the relation between learning and reflexivity with reflexivity being defined as one potential outcome of learning. Any learning process in sustainability transitions occurs in and is influenced by its systemic setting. Reflexivity, as defined by Beers and Van Mierlo (2017), refers to explicitly taking into account this systemic setting. Thus, initiatives or groups may reflexively start to change their scope and orientation towards envisioned systemic change

(internal reflexivity) or to influence their environment and to actually make it more conducive to transitions (Beers and Van Mierlo, 2017). Their approach originally addresses learning processes of "system innovation initiatives" (Beers & Van Mierlo, 2017) that are, by definition, oriented to change in their systemic setting and are yet to develop an actual influence on this setting. As in most of transition research, the focus of learning in transitions has often been on initiatives that have a high transformative ambition from the outset. Learning processes have been described in the context of "transition arenas" (Loorbach, 2010) or "transition initiatives" (Frantzeskaki & Rok, 2018). Learning by and between incumbent actors has in this context widely been neglected up to date (van Mierlo et al., 2020). This leaves a gap in studying collective learning processes of incumbent actors that start out from a less transformative orientation towards their systemic setting. As these actors are deeply rooted in the structures that are reproducing sustainability challenges, a change in orientation is required to tackle the core logics from which they operate (Hermelingmeier & von Wirth, 2021). This article therefore applies an adapted approach at the interface of learning and reflexivity to a local business network comprised mostly of representatives of incumbent businesses. With a process-oriented and longitudinal approach, it traces the reflexive learning journey of the network to monitor shifts in the initiative's internal reflexivity – here defined as transformative orientation – over time. The question guiding this research was: *How does internal reflexivity emerge and shift throughout the learning process of a local business network?* The following section further describes the theoretical background that the research approach is based on. The research design is outlined in the methodology section. Findings are presented and discussed in the following two sections. The article closes with a brief conclusion.

2. CONCEPTUAL FRAMEWORK

By analogy with a mirror, [reflection] entails all
that lies in the field of view [while] reflexivity involves
recognition that the subject itself forms a large part of the object.
(Stirling, 2006, p. 5).

In its most general sense, reflexivity refers to "some sort of recursive turning back" (Lynch, 2000, p. 34). In the context of their work on reflexive modernization, Beck et al. (2003) describe the process of how rational problem-solving approaches of modern society reflexively produce unintended side-effects and thus result in new problems that again are solved with the same rational approach. In that sense, reflexivity is a condition of any modern society that Voß & Kemp (2006) refer to as first-order reflexivity. In the literature on sustainability transitions, reflexivity is taken one step further and applied to the process of problem-solving itself: Being aware of the reflexive character of modernist problem-solving (second-order reflexivity) enables a more systemic approach to complex challenges, characterized by a new process-orientation that will stimulate learning and innovation (Wals, 2009, Bos et al., 2013). Reflexive governance modes such as transition management or adaptive management are geared towards interaction between different rationalities and towards continued learning rather than towards the maximization of knowledge and control (Voß et al., 2006). A recent stream in sustainability transition research has set out to better understanding the mechanisms of learning and its outcomes in transitions processes (van Mierlo et al., 2020). In that context, Beers & van Mierlo (2017) first explicitly include the concept of reflexivity into their conceptualization of learning, asking when and how reflexivity emerges in group learning processes. The authors warn against seeing reflexivity as something that can in a rational way be organized, facilitated and planned as that would lead straight back into the first-order reflexivity trap. Rather, they introduce reflexivity as possible outcome

of rather than a condition *for* learning (p. 418). Any learning process in sustainability transitions occurs in and is influenced by its systemic setting. It is this systemic setting that is the subject to change in transitions processes. Traditionally, the focus here has been on socio-technical innovation in sectoral subsystems (Geels, 2002, Verbong et al., 2008). A more recent stream of research has taken societal systems (e.g. cities or communities) more into focus as subject to transformative change (Frantzeskaki & Rok, 2018, Wittmayer et al., 2014). In both contexts, a transition initiative is successful, if its systemic setting changes alongside with the initiative (Regeer et al., 2009, Elzen et al., 2012). Building on this idea, Beers & van Mierlo (2017) define reflexivity as an initiative's relation to the systemic setting in which it operates (p. 418). They make a distinction between an initiative's orientation to change in its systemic setting (internal reflexivity) and the actual change occurring in that setting (external reflexivity).

For this article, internal reflexivity is used as a proxy for the transformative orientation of the business network under study. Hence, the development of an internal reflexivity is monitored along the learning process: Reflexive elements discursively become part of communicative interaction and in the relation to each other (how can we influence our environment?) and they are translated into practice and action (doing things to actually influence the environment). More precisely, they are monitored across four dimensions and their changing characteristics: (1) discourse (what, i.e. content and vision), (2) relations (who, i.e. roles taken on in the group), (3) practices (how, i.e. ways of going about things) and (4) actions (how, i.e. concrete activities). As the objective is to trace changes in internal reflexivity over time, the main unit of analysis is the reflexivity turn - a shift in orientation towards the systemic setting that manifests across all four dimensions.

In this context, collective learning is conceptualized as discursive shifts that emerge from communicative interaction. In a discursive process, the group co-constructs shared meaning, develops overlapping perspectives on problems and objectives, crafts congruent storylines and jointly identifies options for change (van den Bossche et al., 2011, Hajer, 2006). In contrast to former studies, prominent discursive shifts are summarized over time periods of several months (learning phases) rather than deep diving into single interactions (see for example Beers et al. 2016). This approach allows to heuristically portray the collective learning process leading to changes in the group's overall orientation. Here again, the focus is on those discursive shifts that occur within the four dimensions guiding this research (discourse, relations, practices, action) with specific attention to those shifts that affect the initiative's awareness of the systemic setting that it is part of.

In sum, the conceptual framework applied here is aiming at monitoring the emerging and changing internal reflexivity along a collective learning process (Fig. 1). The focus is on monitoring internal reflexivity turns, operationalized as aggregate shifts across discourse, relations, practice and action. In order to get a better understanding of the process leading to a reflexivity turn, the group's collective learning process is summarized into phases of several months. A first account of external reflexivity (i.e. actual change occurring in the direct systemic context) is given some thought whereas a full account of the network's transformative impact on its context is beyond the scope of this study.

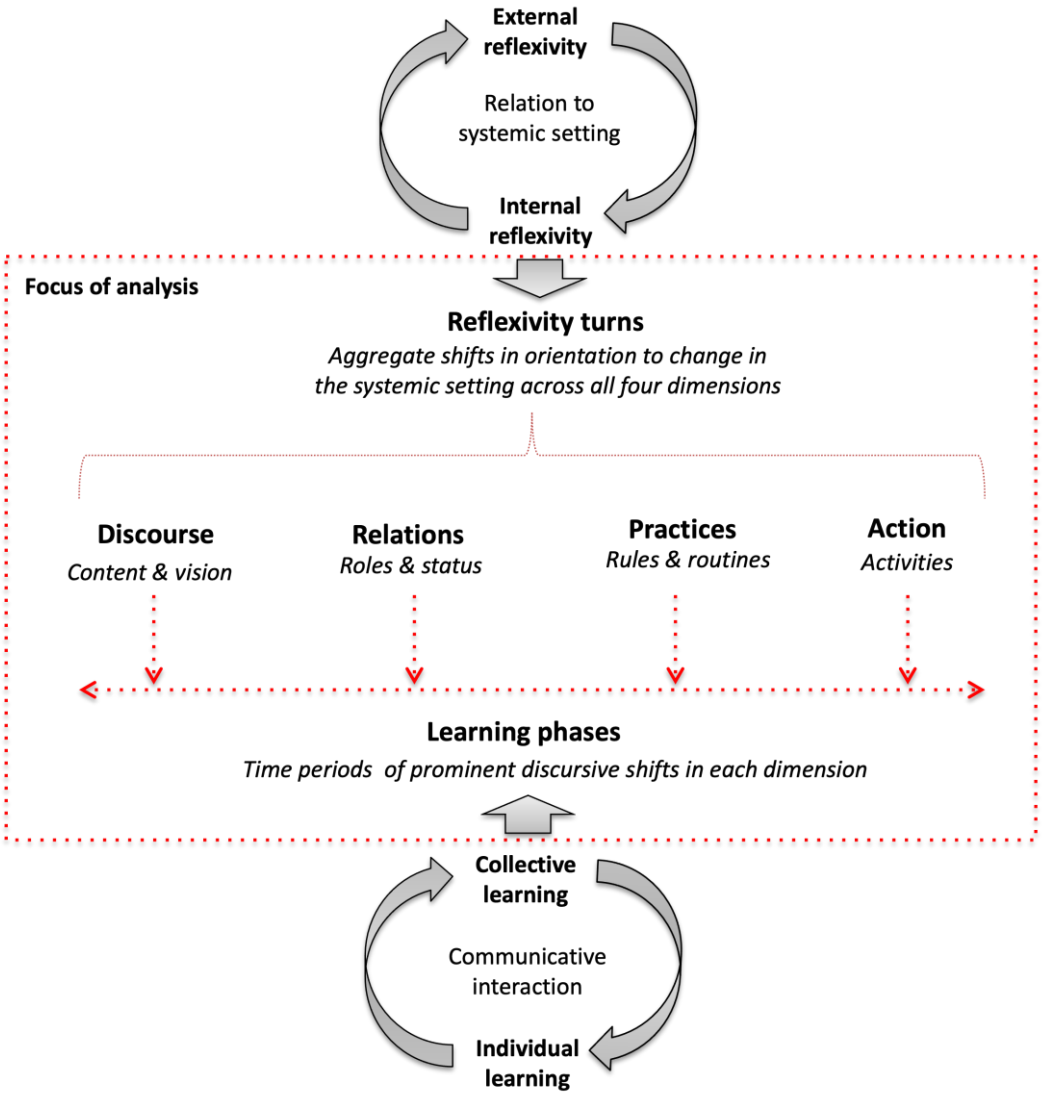

Figure 1: Conceptual framework focusing on changes in internal reflexivity (reflexivity turns) in the network. Changes are operationalized as aggregate shift in discourse, relations, practices, and action. Learning is conceptualized as the discursive process affecting each dimension. The focus here is on learning phases as discursive time periods leading up to the next reflexivity turn. While the focus here is on the network's orientation to change in its systemic setting (internal reflexivity), the assumption is that this orientation is directly related to reflexive changes in that setting (external reflexivity). And while the focus is on collective learning, individual learning is assumed to be directly affected by and affecting the process of communicative interaction (own visualization building on earlier conceptualizations by Beers et al. (2016) & Beers & van Mierlo (2017)).

3. RESEARCH DESIGN

The research design is process-oriented and rooted in a transdisciplinary research approach (Bergmann et al., 2021), in which science and society are seen as overlapping. The researcher

takes on the role as one of the knowledge providers in a common space (Miller, 2013), actively participates in a collective learning process (Pohl & Hirsch Hadorn, 2007) and facilitates parts of the process (Wittmayer et al., 2017). The empirical basis for this article is provided by a longitudinal study of a local business sustainability network that the author joined and studied for a period of three years, between July 2018 and July 2021. The analysis followed an interpretive, qualitative approach (Lang et al., 2012) and was supported by the content analysis software MAXQDA. The design is based on the idea that each interactive situation offers a discursive space (Leeuwis & Aarts, 2011) that can have an influence on reflexivity, i.e. changes in discourse, relations, practices and action. The following sections are dedicated to describing the case, the data sources as well as the role of the researcher in collecting the data and the process of data analysis.

3.1 Case

The case under study is a local business network - the "Future Circle Sustainability" (FCS) - in the larger Wuppertal area in the Western part of Germany. The network was initiated by a Wuppertal-rooted firm in 2017 with the original attempt to exchange on sustainability practices amongst sustainability managers of participating businesses. Since then, the network has successively grown in size and evolved more and more into a multi-stakeholder network between business, civil society and the three municipalities of the region. In the first one and a half years, the majority of participants represented locally rooted companies of different sizes and with different scopes (international to local). The focus was said to be on companies of all sizes based in the larger Wuppertal region. In addition, a few civil society representatives, Wuppertal municipality and a few business-oriented associations joined in the first months. Later on, the group grew more diverse including representatives of the three

municipalities of the region, some larger companies, individual entrepreneurs and more civil society actors. The group's stated objective at the outset was to replicate each other's organizational best practices – a rather technical or rational approach that, in terms of (Voß & Kemp, 2006)'s definition, would be categorized as first-order reflexivity approach (as described in Section 2).

3.2 Data sources & role of the researcher

Data collection took place from June 2018 until May 2021. Data from different moments in time were collected in order to properly display the learning process (Beers et al., 2016, Jorgensen, 2012). The author joined the network in summer 2018, attended regular meetings, was part of multiple working groups and supported joint activities. During that time, data was collected in triangulation through observation, interviews and interventions. Data sources include meeting protocols (minutes taken by the author) of 12 larger network meetings as well as 8 protocols of smaller working group meetings, the documentation of a joint event (Sustainability Night) in October 2019, transcripts of 18 interviews with all network participants at that time (Fall 2019) as well as the minutes of a storytelling workshop facilitated by the author. In addition, the author took into account personal observations from roughly 10 calls, 5 additional (in-between) meetings, roughly 20 email messages and conversations during coffee breaks.

Regular network meetings took place every second month for two hours. They were hosted in turn by the network participants and always included a presentation of the sustainability activities of the hosting organization as well as an open part to exchange on specific topics as well as on the group's activities. Working groups were established throughout the process and

meetings took place in between the network meetings, usually lasted about two hours as well and included a smaller number of active network participants. Topics were the network's strategy, communication, the planning of specific activities as well as developing new formats and collecting topics. The 18 interviews took place in September/October 2019 and lasted between 40 and 70 minutes. They were conducted in person or by phone, recorded and transcribed.

The biggest joint activity that the group engaged in during the study period was the "Sustainability Night" in October 2019 targeted at decision makers in the participants' organizations and at stakeholders in the region. Observations, minutes taken by the author, as well as 9 shorter interviews taken at the event served as further data sources. Finally, a couple of interventions by the author served as impulses for reflection during the process: (1) a presentation of the research project and a discussion of objectives of the process in the beginning (Fall 2018), (2) the interviewing process in combination with a presentation of tentative results in February 2020 and (3) a facilitated storytelling workshop in February 2021.

The engagement of the researcher in a transdisciplinary research setting requires careful reflection of one's own role and the impact on the research process (Wanner et al., 2018; Wittmayer et al., 2017). As reflected by the participants, having been part of the process and engaging in discussions as an individual made a difference to the atmosphere and the topics that were brought to the table. Negotiations were likely supported by the interview process, in which the participants stated to find the reflection on their own role and visions for the network helpful and enlightening. As such, the interviews functioned as amplifier of the general deliberation process – they triggered deeper (individual) reflections and made

positions more explicit. The repeated initiation of reflections on the reflexivity of the network may have contributed to its actual reflexivity – a finding that supports an insight by (Beers & van Mierlo, 2017).

3.3 Data collection

Data collection was undertaken in multiple steps. In a first step, between summer 2018 and summer 2019, the existing transformative orientation of participants and at the network level was observed and assessed. The guiding question during this time period was: Where does change in the systemic setting come into focus at the individual and the collective level? Building on these insights, the semi-structured interview guide for interviews taken in Fall 2019 was developed based on the conceptual framework with the four dimensions - discourse, relations, practices, action – as main categories. These were further enriched with sub-questions that emerged from observations, for example 1) Discourse: What is the individual and organizational perspective on sustainability? What is the future vision for the network? What should the structure of the network ideally look like in two years? 2) Relations: What is the motivation for being part of the group? What is the perceived role within the group? What is the role of the region / the city / the context that the network is based in? 3) Practice: What are useful ways of interaction? What other formats or types of exchanges would you wish for in the future? Who should be targeted? 4) Action: What are concrete ideas for action? What is the goal of the Sustainability Night as one specific activity?

In a second step, interviews were taken with all participants in Fall 2019 with the objective to assess individual definitions of sustainability as well as perspectives on the network (what are objectives, what are visions for its future development). These individual perspectives helped

to better understand the various streams influencing communicative interaction in the group. The interviews were analysed using the content analysis software MAXQDA. Codes were oriented along the main categories of discourse, relations, practice and action with deductive codes emerging from the interview questions. More subcategories were inductively added as certain aspects came up repeatedly throughout the analysing process, for example: Discourse: The role of place (the region) for the forming and the activities of the network) (Table 1). This round of analysis was presented to the network in February 2020 as a form of intervention (making implicit assumptions and different streams of argumentation explicit) and reflection (how do we use these insights to move on?).

Table 1. Overview of codes in MAXQDA with the main categories discourse, relations, practice and action, deductive codes following the interview guide and inductive codes that were added during the analysis.

Main categories	Deductive codes	Inductive codes
Discourse	• Definition of sustainability • Vision for the network • Objectives of the network	• Individual vs. organizational perspective • Role of the region / the place
Relations	• Role of the network in the region • (Future) target group of the network • Leading individuals in the group	• Own role in the group
Practice	• Useful types of exchange • Desired standards & rules • Future structure of the network	• Professionalization
Action	• Objective of the sustainability night • Ideas for future action	• Need for action in general

In a third step, another period of observations started that was dominated by the COVID-19 pandemic and shifted conversations to the digital space. All notes taken during this time were again scanned for discursive shifts in discourse, relations, practice and action with a focus on how references to the systemic setting might have changed during that time.

In a fourth step, a (digital) storytelling workshop was hosted by the author in February 2021. The objective here was to start another round of reflections on how the group had developed up to that point and to make explicit current visions of how it should further develop in the future. While the interviews had made explicit individual lines of argumentation, the workshop aimed for sparking direct interaction and for creating a joint narrative. Discussions & results of the storytelling workshop were again analysed with a focus on how discourse, relations, practice and action were described in their development and how a transformative orientation was part of this collective description.

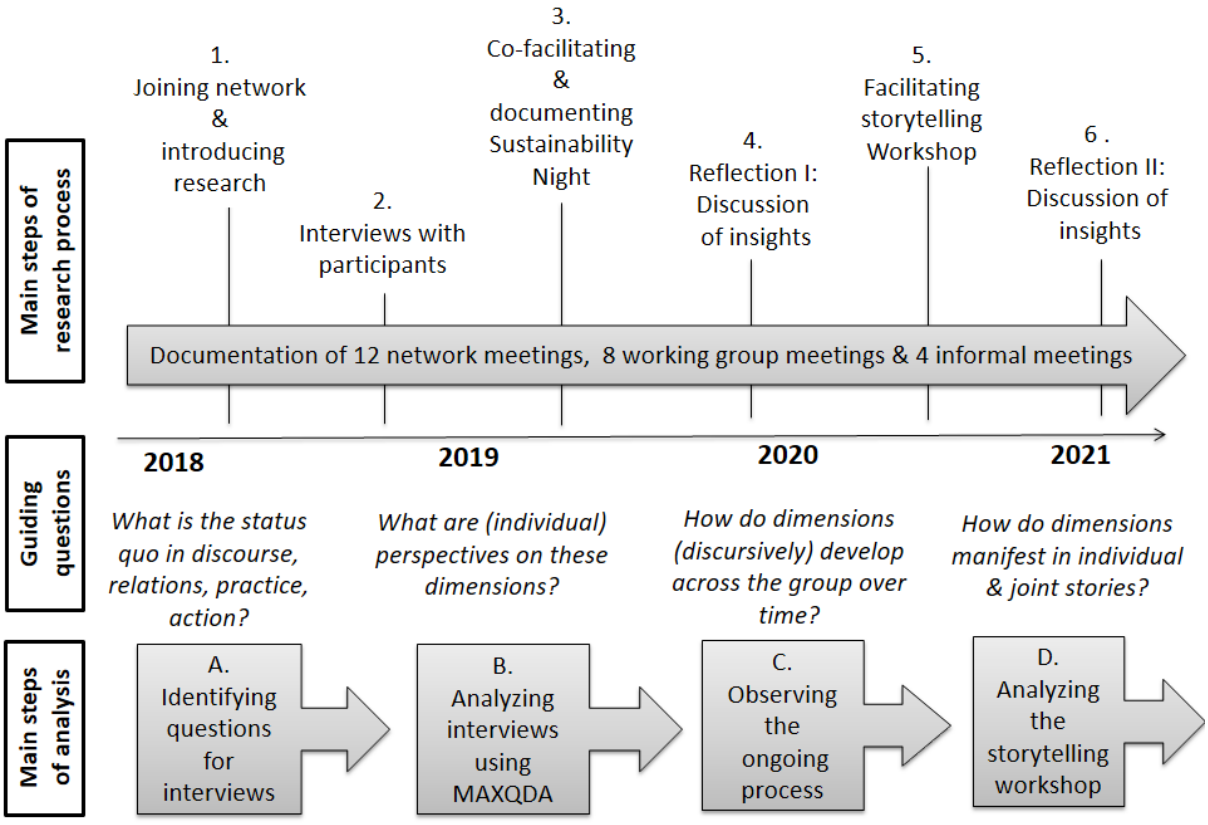

Fig. 2. Overview of the longitudinal research process from 2018 to 2021 with six major points of data collection as well as an ongoing documentation of larger and smaller network meetings. Four questions guided the main steps of analysis, oriented along the four dimensions of discourse, relations, practice and action (own visualization).

4. FINDINGS

All in all, observations suggest that from an internal reflexivity point of view, the network has taken a big leap forward during the study period: (1) By growing in size and in the diversity of stakeholders, (2) by formulating objectives targeted at regional transformation and (3) by generating external feedback in the form of various invitations to events or advisory positions. This however, happened partly at the expense of overall group dynamics and an inclusive discursive process that – in the later phase of the study period – was led by a small group of leaders within the network. A lack of negotiations and joint action in that period was compensated for by professionalization and individual leadership. The reference to the region showed to play an important role over the entire study period – for sparking negotiations as well as for formulating a joint vision. Section 4.1 provides an overview of major changes in internal reflexivity showing in discourse, relations, practice, and action over the entire study period. Section 4.2 zooms into the process and chronologically introduces four learning phases demarcated by reflexivity turns. The learning phases summarize shifts in discourse, relations, practice and action leading up to the next aggregate shift (reflexivity turn) across all dimensions. Quotes are referenced by an "I" for interviewee and "P" for protocol. All interviews and protocols were successively numbered from 1-18 and from 1-12 respectively. Working group meeting protocols are marked "WGP" (8 in total) and informal meeting protocols "IMP" (5 in total).

4.1 Overview: The development of discourse, relations, practice and action over the study period

Discourse has shifted from an understanding of business sustainability as a collection of business practices towards a joint responsibility for the region. Whereas the exchange in the beginning evolved around introducing reusable cups in the company's canteen, the story that was formulated in February 2021 focused on sustainability of the region with reaching climate-neutrality within the next 10 years as one objective. Also, scaling objectives for the group widened from growing in size only to growing in perspectives & serving as a role model for other regions.

Relations and roles have in the first half of the study period developed from a group of organizational representatives to a group of involved engaged individuals. Along the process, people reported on a perceived dilemma between their ambitious personal views and the less-ambitious organizational position they represented. This dilemma was often dissolved by taking on a more personal role in the network and by forming a group identity rather than representing an organization. This personal element also provided the basis for the development of trusted, informal relations between participants. Later on in the process, a few individuals took on more of a leadership position, which happened at the expense of overall group dynamics.

Practice developed along with discourse and relations towards exchanging more on potential joint action than on organizational best practice. The bi-monthly network meetings were given more structure so that each of them had a thematic focus on the one hand and a time slot for exchanging ideas on group action on the other hand. During a phase of professionalization, a Declaration of Intent was developed that had to be signed by each participating organization as a commitment to the sustainable development goals. During the same period, working

groups were formed, so that decision-making was taken out of the main group and handled more and more by smaller groups of individuals.

Action largely remained on a discursive level where many ideas for group activities, thematic days and events were exchanged. Only in one case, a plan for a bigger event was translated into action – the Sustainability Night. This action marked the most tangible interaction with the systemic setting and at the same time fostered in-group cohesion and the decision to professionalize.

Place played an important role throughout the entire process and for all four dimensions: On the level of discourse and relations (Why are we here? Why in this constellation? What are we targeting as a group?) as well as on the level of practice and action (Who can be part of the group? Where are we having our meetings? Where are we placing our activities and why?). The interviews showed that visions for the network in 2025 were almost exclusively targeted at transformative impact on the region. Concrete visions were formulated as *"We as regional companies jointly fight for sustainable and climate-friendly change in the region"* (I2) or *"The Wuppertal region is becoming the first climate-neutral region supported by regional business"* (I1). Participants further referred to the region as being the *"identification bracket"* (I2) for the group and the local focus being the pre-condition for developing a strong community and trusted, personal relationships (I18). Also, the Wuppertal region specifically was noted to be prone to becoming a role model for transformation with its active civil society and many family-owned, traditional medium-sized enterprises (I12, I16, I18). As a consequence, creating local impact was an important objective to many (e.g. I1, I2, I4, I8, I18, P4).

4.2 The process: Four learning phases and reflexivity turns

4.2.1 The forming phase: From individual to collective identity

In the **forming phase** (October 2017 – January 2019), the focus of the network was on the individual organization and "*practice-oriented knowledge exchange"* (I9*)* between mostly business organizations in order to "*create blueprints that other companies can adopt"* (I9). As understandings of sustainability varied widely between participants, discussions in bimonthly meetings of two hours stayed on a rather superficial level. While some participants defined sustainability as "not being a competitive factor but rather an add-on to an organization's core business" (I9) others started out with the objective to discuss sustainability as "an organization's core responsibility" (I1). At this point, there was no further discussion or conflict as no specific outcome was targeted. Relations were mostly formal, most participants did not know each other before joining the network. The target group was defined as business organizations based in the larger Wuppertal region. Some multipliers (municipality, civil society) were invited but the best practice exchange was meant to focus on business practices: *"I see this group as a learning and exchange platform for best sustainability practices." (I6).* However, a common theme that came up and grew more prominent in discussions was the lacking support within the participants' organizations: *"If we really want to change something internally, we need to convince the decision makers in our company"* (P2). The idea to plan an event targeted at a growing awareness for the importance of business sustainability found resonance in the group (P2).

Reflexivity turn 1

The central turn here was the re-definition of the role of participants vis-à-vis their organizations: the perception shifted from a group of organizational representatives to a *"group of committed individuals"* (I7). This change in perspectives created the basis for a shift in the following discourse and for a growing cohesion throughout the following phase. It also provided the ground for the idea to not only exchange on best practices but to engage in joint action.

4.2.2 The negotiation phase: The power of constructive conflict

The **(2) negotiation phase (January 2019 – October 2019)** was mainly characterized by the planning of the Sustainability Night, an intense process with discussions and conflict. Pursued objectives ranged from a representative event to reach out and inspire as many decision-makers in the region as possible to a small workshop-like setting to exchange practices between organizations that were already members of the group. Participants that reported to feel a lack of support across different departments of their organization and to be *"fighting windmills"* as sustainability managers (I6, I9, I17), saw the group as *"self-help group"* (I9) and "*exchange platform"* (I6). To them, it seemed most effective to showcase concrete sustainability practices at the event to convince decision-makers internally to implement some of these practices. In contrast, participants that defined sustainability as core to their business saw a need in taking on a role model position and inspiring others: *"We want to reach all 15.000 businesses in the region. That should be our goal"* (I1). *"We need a keynote speaker that catches the big managers' interest and gets to their emotions."* (I2). Decisions had to be taken, so individuals had to make their perspectives on sustainability and on the group's objectives explicit. During this phase, the concrete event served as negotiation platform, making participants' assumptions explicit. Discussions on the event as a boundary object led

to deeper conflicts on definitions of (organizational) sustainability and responsibility, of general objectives of the group and – consequently – of how to proceed as a group. Reflexivity itself was the core to negotiations: To what extend are we a "self-help group" and informal network as opposed to an official governance actor in this region? How much do we want to reach out? And in consequence, what are effective ways to reach into our own organizations as opposed to the wider systemic setting? The new claim "Responsibility. Attitude. Doing" was created to stress a new focus on joint action. The Sustainability Night as *"joint success experience"* (I7) created a strong in-group feeling that shifted the general tone from formal to informal. The awareness for the context was expressed in the reflections of the Sustainability Night, in which participants declared the event as success due to the high participation rate of regional stakeholders and to membership requests in the aftermath of the event (P4, WGP4).

Reflexivity turn 2

The second turn showed in the re-definition of the group's purpose and its objectives. While best practice exchange was the initial motivation to form the group, the planning of the event shifted the internal perception from "self-help group" to governance actor in the local context and from exchange to action in that context.

4.2.3 The professionalization phase: Redefining practice & roles

Following the Sustainability Night, the professionalization phase (October 2019 – October 2020) was guided by the idea of professionalization and growth of the network. The event had provoked a conflict around the need for professionalization based on the consensus that the organization was extremely time- and resource-intensive (e.g. I7, P6, WGP4). To some, the major learning was that future action required more structure, commitment, and financial

backing. Others wanted to return to the old group dynamics as further growth to them threatened the developing trust and intimacy of the group (e.g. I9, P6). A small group of committed individuals in favour of professionalization took over more leadership and formed a working group that discussed the strategic development of the network. An additional working group developed external communication material (social media channel, website). Key outputs of this time were a Declaration of Intent to be signed by all participants and a website. The Declaration of Intent introduced the Sustainable Development Goals (SDGs) as basis for further action taken in the group. This phase was marked by fluctuations in the group. Amongst the new members were two additional municipalities of the region - the scope widened further from a business to a multi-stakeholder focus. With new members joining, the tone shifted to becoming more formal in larger network meetings again. In contrast, smaller working groups kept working on a personal level and relationships intensified further. With a few frontrunners taking over more responsibility, decisions were taken in smaller group settings. The Declaration of Intent including the introduction of the SDGs as a basis was pushed by some participants that were commonly viewed as the leading figures of the group (e.g. I10, I12, I13, I18). Half-way through this third phase, the COVID-19 pandemic kicked in. Meetings were transferred into the virtual space and with that were reduced to thematic exchanges rather than personal conversations. The dynamic towards two different paces - a few frontrunners with ambitious goals and intensive relationships versus a larger group of participants that are loosely connected – took on further shape.

Reflexivity turn 3

The major turn was the decision for professionalization in order to reach out and grow as a network. This turn led to a re-definition of roles, to the development of new practices and to

creating new documents and communication channels. While these measures were aiming at a more strategic outreach into the systemic setting, they also reduced group dynamics and the focus on joint action faded. This effect was amplified by the COVID-19 pandemic that further reduced interaction in the group as a whole. Professionalization was pushed by individuals and new practices were implemented.

4.2.4 The scaling phase: Crafting stories & reaching out

During an informal digital pre-Christmas meeting in December 2020, participants voiced the need to revive dynamics in the group by exchanging inspiring stories and by crafting a joint vision. This led to the planning of a storytelling workshop in February 2021 facilitated by the author. The workshop marked a point of returning group dynamics. Individual sustainability stories were harvested, some reporting the implementation of best practices that had been shared in the group - as for example the implementation of e-charging stations that are shared with the neighbourhood, bee hives on the roof and reusable packaging in cantines - while others reflected on a generally growing interest in the company to take on more responsibility (P7). A collaborative story of where the group came from and where it was headed was developed. In the collaborative story, place played an important role. What had come up before was made explicit: the objective of transforming the region and making it a supra-regional role model. Objectives were formulated as for example *"building something tangible in our region, something that requires us to put on some rubber boots and get our hands dirty"* (P7) and further as *"providing inspiration to individuals, organizations and other regions"* (P7*).* Concrete ideas for action – from a joint tree-planting day to a coordinated sustainability day for apprentices in the region - were sparked (P7). However, no action resulted from the workshop as the Corona crisis tied up too many resources. Due to fluctuations in membership

and the lack of personal meetings, internal ties had weakened, the commitment to engage in decision-making, in taking over responsibility or in hosting a meeting was low. In contrast, the dynamic of a small group of frontrunners leading the group grew further. Also, external interest grew. Some of those members that had joined in the very beginning – amongst them two of the biggest producing companies in the region - now returned as they had noticed the professionalization and growth of the network. In addition, some companies from other regions reached out as they were interested in cross-regional exchange. Between March and August 2021, representatives of the group presented the group's work at three different supra-regional events. The city of Wuppertal started a two-year process of developing a sustainability strategy for the region and invited a representative of the network to be part of the steering group.

Reflexivity turn 4

Another central turn occurred in the ongoing forming of the group's identity: Individual leadership as opposed to overall group dynamics took on a central role. The orientation towards joint action faded while at the same time, strategic outreach resulted in receiving new membership requests, invitations to events and media attention as signals of an emerging external reflexivity (response of the systemic setting).

Table 1: Overview of reflexivity turns and learning phases with changes in discourse, relations, practice and action. The grey rows summarize the reflexive starting point (R 0) and the following reflexivity turns (Rt 1 – Rt 4). The rows in between refer to the four learning phases, in which the characteristics of discourse, relations, practice and action are described. Within each learning phase, at least one dimension (highlighted) showed to be most prominent trigger for discursive shifts and for inducing the following reflexivity turn (own visualization).

	Reflexive learning journey in four phases			
	Discourse (e.g. vision, objectives, definitions)	**Relations (e.g. group dynamics, roles, target group)**	**Practice (e.g. rules, routines)**	**Action (e.g. activities, concrete doing)**
R 0	**Organizational representatives that want to exchange on best practices to learn more about business sustainability**			
Forming phase	Need for best practice exchange to replicate successful solutions to sustainability challenges in organizations	Organizational representatives meeting in informal setting	Bi-monthly meetings & best practice exchange	None
Rt 1	**Shift from organizational representatives to committed individuals wanting to engage in action**			
Negotiation phase	Negotiations on individual definitions & group visions, regional transformation formulated as objective	Informal, trustful relationship. Strong in-group feeling through joint planning and success experience	Intense planning phase, organizational tasks, everyone is contributing	Sustainability Night as joint success experience
Rt 2	**Shift from focus on exchange to focus on joint action in the region**			
Professionali-zation phase	Further growth & joint action requires professionalization and financing	Growth of network, more diversity of stakeholders, clearer roles forming: frontrunners, dropouts and newcomers	New working groups taking decisions, Declaration of Intent to be signed by each member, new media representation	Working groups: Creating the Declaration of Intent, a website and social media channels
Rt 3	**Shift from loose network to professional structures as a basis to grow and to perform action in the future**			
Scaling phase	Growing focus on scaling in order to create impact in the region and to be a role model for other regions	Some companies re-join, new membership requests, cross-regional exchange starting, prominent role of a few frontrunners in the group, less overall group dynamics	Two paces: Regular network meetings in entire group & strategic outreach in small groups	Individual representation of network at external events / groups
Rt 4	**Shift from whole group development to strategic outreach through individual leadership**			

5. DISCUSSION

The following section first elaborates on some of the insights concerning triggers of reflexivity turns in the context of the collective learning process (5.1). The next section (5.2) then takes a more general account of the role of reflexivity and learning in transition research. Finally, section 5.3 will look into some limitations of this study and suggests pathways for future research.

5.1 Reconsidering the relation between reflexivity and learning

Insights suggest that the relation between reflexivity turns and learning dynamics changed over the study period. In the forming and negotiation phase, communicative interaction amongst the entire group, an increasing group cohesion and discursive shifts on the group level served as levers for the first two reflexivity turns. A newly forming group identity, changing roles within the group and negotiations around concrete action were major triggers for shifting the perspective from individual practices to the group as transformative body in the region. Beers & van Mierlo (2017) describe constructive conflict as trigger for producing learning outcomes in communicative settings. Building on van den Bossche et al. (2011) the authors find conflict in direct interaction to be positively related to building team mental models. The findings of this study confirm the valuable role of conflict also in the context of an aggregated learning process and, in this case, especially in the beginning of the group`s learning process. The Sustainability Night served as negotiation platform that fostered trustful relationships and strong group dynamics. These insights support former research that found the need to make normative assumptions explicit to create a joint

vision (Randles & Laasch, 2016, p. 61). After the Sustainability Night, the relation between a further developing internal reflexivity and learning dynamics changed: During the professionalization phase, decisions were taken to smaller working groups and debates were decentralized. Collective group dynamics were replaced by individual leadership and new practices. Communication to the outside became more effective while internal dynamics decreased. Negotiation was taken out of the main arena so that the communicated orientation of the group seemed to be somewhat decoupled from a collective learning process. From this observation, we would assert that professionalization and individual leadership can, to a certain extent, bypass collective discursive processes in producing reflexivity turns at the network level. This insight further provokes the critical question, to what extend an increasing transformative orientation at the group level allows for inferences concerning learning on the individual or the organizational level – a question that was not the focus here but would require more attention in future research (see 5.3). Revisiting Beers & van Mierlo (2017)'s conceptualization of internal reflexivity being the outcome *of* rather than a condition *for* learning (p. 418), findings suggest reflexivity to be regarded as a feature of learning that might emerge from and in turn affect a learning process. Thus reflexivity turns are an outcome but also a trigger of a specific direction of learning. Place emerged repeatedly as boundary object that put other discourses into the context of a specific institutional setting. With that, the reference to place created awareness for the context and fostered internal reflexivity. The hypothesis drawn from that is that place can serve as the shared systemic setting that enables reflexivity in a group to emerge, especially when the group is as diverse as the one under study with no other obvious common systemic context. Especially in cross-sectoral networks

with a wide range of organizational sizes, logics and representatives, place seems to provide the systemic boundary for internal reflexivity to emerge. This insight relates to and extends earlier findings that sense of place correlates with sustainability orientation in organizations (Shrivastava & Kennelly, 2013) and with narratives of change in transition initiatives (Frantzeskaki & Rok, 2018). This research suggests a mutually reinforcing dynamic between sense of place and reflexivity – when boundaries of the group are re-negotiated (who can be part?), when ideas of upscaling are shared (whom do we want to reach? Where do we want replications to emerge?), and when visions are crafted (how can we become the first climate neutral region in Germany). Place also takes on an essential role when further studying the alignment of internal and external reflexivity, i.e. "the extent to which an initiative shares an orientation towards structural change with its institutional setting" (Beers & van Mierlo, 2017, p. 426). The COVID-19 pandemic hit amid the study period and might have had a critical influence on the development of the network. Overall group dynamics decreased as soon as no personal meetings were possible any longer. The momentum of the Sustainability Night ceased in the following digital meetings and while some frontrunners kept up the motivation to pursue professionalization, others were occupied with organizational crisis management. At the same time, this period might also have opened a window of opportunity for new members to join the network as routines in the network as well as in organizations were interrupted.

5.2 Reflexivity and learning in sustainability transition research

As opposed to former studies that conceptualize learning and reflexivity to the study of transition initiatives with a high transformative orientation from the outset, this

study extended the conceptual framework to studying a moderately transition-oriented local network of mostly business incumbents. Against the theoretical background of second-order reflexivity, in which spaces for learning take on an essential role, the case of the local business network provides an example of a slightly different deliberative space (Wittmayer & Schäpke, 2014). The cross-sectoral character of the network loosens up the sectoral consideration of transition processes. Especially in the context of place-based transitions, cross-sectoral exchange and learning might be essential to reflexive governance processes (Voß & Kemp, 2006). Participants of the group under study - mostly representatives of incumbent business - reflected on the beneficial effect of learning with and from other sectors as well as from organizations of other sizes. As the basis for exchange in this constellation was the shared place and not a shared sector or a shared business purpose, participants were able to learn and formulate transformative objectives without entering a competitive space. This way, a new logic of trust and cooperation focusing on the local context emerged that has been referred to as “cooperative advantage” elsewhere (Cantino et al., 2017, Hermelingmeier & von Wirth, 2021). All in all, cross-sectoral local sustainability networks as studied in this case are suggested to be highly interesting cases of actor collectives that can function as transition initiatives in the making (i.e. actor collectives with a high transformative potential), especially in place-based transition contexts. However, an insight drawn from this research is that changes in internal reflexivity do not only correspond with collective learning dynamics but can also be fostered by professionalized structures and individual leadership. Learning at the individual and organizational were not the focus but were most likely unevenly distributed between members of the group and across the study period. The question

thus remains how internal reflexivity and learning on different levels can effectively be reconciled in actor collectives.

5.3 Limitations & further research

The study focuses on the question of how internal reflexivity, that is, a business network's transformative orientation, is developing and changing throughout a joint learning process of several learning phases. First signs of an emerging external reflexivity are reported on in the findings section. Further looking into external reflexivity and the actual transformative impact of the network would tie in with research on emerging governance actors and their legitimacy in local governance processes (Westman et al., 2020). Furthermore, power asymmetries within the network have been mentioned but would be highly interesting to address further in the context of governance and legitimacy: Who is setting the agenda of the group? Who can participate? Who is taking decisions? Such questions would take into consideration that power always influences internal group dynamics and external relations (Avelino & Rotmans, 2011). Furthermore, it would be interesting to apply the same conceptual approach to a different sustainability network, especially if also initiated by business. A case for comparison could be another local network or a supra-regional network – both with the intention to find out more about the specific role of place for the learning process and the emergence of reflexivity. Lastly, one key insight was that reflexivity at the group level does not necessarily correlate with individual or organizational learning. It would thus be interesting to further look into aspects that allow for reflexivity to emerge and that, at the same time, foster learning on the individual and organizational level between participants of a group. An assumption

drawn from this study is that joint action could play an important role in this context as concrete doing fosters negotiation and opens up the space for learning. The role of place would also be interesting to study regarding a potential crowding-out effect that a focus on regional transformation on the group level could have on an organizational transformative orientation (as a transformative regional engagement might run parallel to a business as usual).

6. CONCLUSION

This article started out from the assumption that reflexivity in its various dimensions is essential to understanding and governing sustainability transition processes. It makes a contribution to transition research by further exploring the role of reflexivity in learning processes and by empirically monitoring the reflexive learning journey of a local business network over a longer period of time. It reports on insights from a three-year transdisciplinary research process with the network. The findings suggest four learning phases separated by major reflexivity turns, that is, changes across discourse, relations, practice and action. While collective learning dynamics in the form of trusted relationships, constructive conflict and joint action can support the emergence of internal reflexivity, they can also – to a certain extent – be compensated for by professionalization and individual leadership. A repeated reference to place played an important role in the groups' development and as subject to an increasing reflexivity. Future research is suggested to further empirically study the actual transformative impact that a local business network might develop over time (external reflexivity) as well as taking further conceptual account of the role of place in processes of learning and emerging reflexivity.

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Paper 3: The role of place in shaping responsibility logics

Overview

Full title: The role of place in shaping responsibility logics: Revisiting the relation between place and business sustainability

Focus: An empirical assessment of the role of place in shaping organizational logics, thus positioning organizational change in the local geographical and symbolic systemic setting.

Publication status: Under review in Business Strategy and the Environment

Co-authors: Jun.-Prof. Karoline Augenstein & Jun.-Prof. Alexandra Palzkill

Own contribution: Research design, data collection and analysis, first manuscript draft, revisions (estimated to be 85-90%)

Abstract: Place has been suggested to play a role for the sustainability orientation in business. A research gap exists in zooming in further on this relationship and in analysing how the organizational sense of place influences such an orientation. Applying the conceptual lens of institutional logics, we operationalize sustainability orientation as hybrid responsibility logic and analyse the role of place in the forming of such a logic. We present the results of a case study of businesses from a local sustainability network in the Rhine-Ruhr region, Germany. Based on qualitative interview data we found place to function as a coping mechanism in dealing with conflicting logics in the context of sustainability challenges. Across four heuristic types, we describe different roles of place in shaping responsibility logics: from providing the scenery for philanthropic engagement to being the nucleus for transformational efforts.

Keywords: Business sustainability, institutional logics, sense of place, transformation, typology, learning

Main text

1. INTRODUCTION

Business organizations play a central role in dealing with sustainability challenges in the 21st century, yet the way how firms take on that challenge varies widely (Hermelingmeier & Von Wirth, 2021). Recent research suggests organizations' sense of place to be an influential factor in how business comprehend their role in the context of sustainability (Mazutis, Slawinski & Palazzo, 2021) and that organizational sustainability will stay under its potential as long as it is operating with under-theorized concepts of place (Guthey et al., 2014; Shrivastava & Kennelly, 2013). In management and organizational theory, place has long been treated as the backdrop for organizational practices and has only in recent years received more conceptual attention (Elmes et al., 2012; Guthey et al., 2014; Lawrence & Dover, 2015; Mazutis et al., 2021; Thomas & Cross, 2007). In their much-cited work, Shrivastava & Kennelly (2013) suggest a rootedness in place to have a positive effect on the sustainability orientation of business. While these authors conceptually suggest a business' relation to place to generally have a positive effect on (the place-based) business sustainability, the question remains how place influences the general sustainability orientation in business (see also Mazutis et al., 2021). In order to address this question, we applied the concept of institutional logics to get a better grip on the notion of sustainability orientation: In the context of the growing societal discourse on sustainable development, businesses are facing new stakeholder demands and competing expectations which goals to pursue (Battilana et al., 2022; Kraatz & Block, 2017). These competing expectations are informed by different institutional backgrounds and their respective logics. Whereas business organizations are ideal-typically guided by the logics of the market and the corporation, in reality they are often

confronted with multiple logics, for example due to their ownership structure (e.g. family businesses) or to their core business being rooted in the realm of the public sector (e.g. health) (Laasch, 2018). The transversal demand to take on societal responsibility in the context of sustainability challenges combines multiple first-level logics including those of the market (e.g. competitiveness) but also those of the state (e.g. regulation), of professions (e.g. sustainability managers), and of the community (e.g. local resource management) (Radoynovska, Ocasio & Laasch, 2020). Coping with and negotiating these various logics produces a third, hybrid logic that (Radoynovska et al., 2020) refer to as "responsibility logic". We employ this concept as a more fine-grained consideration of sustainability orientation and in a second step ask for the role of place in the forming and the characterization of such a logic. Former research at the interface of institutional logics and place has focused on place-specific logics by, for example, studying the relationship between regionally-tied logics and the location of organizations (Tillemann, Russo & Nelson, 2020) or the supportive role of regional institutional logics for shared local meaning systems (Vedula, York & Corbett, 2019). In the context of their work on institutional logics in sustainability transitions, Fuenfschilling & Truffer (2014) suggest a potential influence of place on organizational logics as an interesting pathway for future research. Building on these prior works, we relate institutional logics with a sociological perspective on place that goes beyond place as geographical location. We operationalize place as sense of place, defined as the combination of place-attachment and place-meaning. For our empirical study, we took interviews with a sample of businesses from the Rhine-Ruhr Region in Germany that are all part of a local business sustainability network. Expressed by their participation in the network, all businesses consider themselves sustainability-oriented. Furthermore, all of them share a tradition in the region of 30 - 150 years and are either family-owned or focused on doing business in the

region, which allows for the assumption that these businesses attach meaning to the place although their business operations are not necessarily place-specific. In the following section we elaborate on the concept of responsibility logic and on the concept of sense of place. Next, we introduce the methodology. In the findings & analysis section we give an overview of insights we gained from interviews and accompanying conversations. We then aggregate our findings into a heuristic of four roles of place in relation to different types of responsibility logics across our case study sample. In the discussion section we critically reflect on our findings and suggest implications for practice and research. Finally, we draw a brief conclusion.

2. THEORETICAL BACKGROUND

2.1 Responsibility logic as sustainability orientation: The institutional logics' perspective

Inasmuch as institutional logics are the logics of institutions,
we can also consider responsible management as an emerging logic (...)
central to an emerging logic of responsible management is sustainability.
(Radoynovska et al., 2019, p. 4)

Over the past decades, the demand for a corporate responsibility in the context of sustainable development has introduced a new layer of complexity and institutional pluralism to business (Bondy, Moon & Matten, 2012; Campbell, 2007; Wickert & Risi, 2019). Diverse expectations and the pursuit of financial and societal goals at the same time have been described as potentially synergetic (Freeman & Laasch, 2020; Porter & Kramer, 2011) but also as often being in tension or even incompatible (Battilana et al., 2022; Hahn et al., 2010). Institutional logics shape how individuals and organizations "produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality" (Thornton

& Ocasio, 1999, p. 804). In the organizational context, they refer to "a set of assumptions and values, usually implicit, about how to interpret organizational reality, what constitutes appropriate behaviour, and how to succeed" (Thornton & Ocasio, 1999, p. 804). Thornton, Ocasio & Lounsbury (2012) describe six first-level logics, representing the major institutions of society: the family, community, religion, state, market, professions, and corporation. At the level of the organization, institutional logics translate into organizational rationales and shape how the organization operates. Idealtypically, business organizations operate in the institutional context of the market and the corporation, thus following the first-level logics derived from these institutions (Laasch, 2018). In reality, business organizations operate in complex environments: they do not operate exclusively in markets, but also within societies, fields, industries or in relation to other organizations (Radoynovska et al., 2020). Consequently, they have to learn to deal with multiple, potentially conflicting, institutional logics. Obvious examples for businesses operating in institutional pluralism are for example Public-private partnerships (PPPs) operating at the interface of the state and the market, family businesses being influenced by the logics of the family or social businesses that pursue a social objective by the means of a commercial logic. Organizations that incorporate elements from different institutional logics are referred to as hybrid organizations (Battilana & Dorado, 2010) and they are gaining prevalence in modern societies (Kraatz & Block, 2008). It is in the nature of hybrid organizations that the considered logics are not always compatible (Besharov & Smith, 2014; Greenwood et al., 2010), so coping mechanisms resulting in an integration or combination of logics have come into focus of research (Greenwood et al., 2010; Lounsbury & Crumley, 2007; Pache & Santos, 2013; Tracey, Phillips & Jarvis, 2011). According to Pache & Santos (2013), *decoupling* points to strategies in which a single logic dominates and additional logics are more peripheral, *compromising* refers to attempts to

reconcile various demands by fulfilling a minimum standard of what is expected by institutional referents, while *combining* describes an integration of intact elements of multiple logics in the core mission and strategy of the organization. The concept of a responsibility logic builds on the idea of such a hybridity, with its different rationales and thus potential conflict: it is constituted by multiple, quite contradictory, first-level logics such as that of the market (e.g. holding a competitive advantage and meeting shareholder interests), the corporation (e.g. meeting the demands of top management), professions (e.g. attending to the values of new professions, such as sustainability managers), the family (e.g. representing the values of the owner family) and the community (e.g. appealing to the interests of the local community and encouraging responsible use of natural resources) (Radoynovska et al., 2020). The common motive behind these various rationales is the concern for sustainability through stewardship of economic, social, and environmental resources (Laasch & Conaway, 2015; Rasche & Gilbert, 2015). In order to get a better grip on an organization's sustainability orientation, the concept of a responsibility logic helps to better understand the different rationales that businesses are confronted with in the context of sustainability, whether and how they learn to reconcile conflicting rationales and how this translates into concrete practice.

2.2 Sense of place

> *A pragmatic sense of place must be an essential component in the development of effective ways to cope with 21st century environmental and social challenges.*
> *(Relph, 2009, 24)*

In recent years, the critique of the placeless character of the social sciences and the long underestimated role of place in social processes has become more prominent (Frantzeskaki

& Rok, 2018; Thomas et al., 2008). Especially in management and organizational theory, place has mostly been treated as the context for organizational practices rather than an influential factor for organizational processes (Thomas et al., 2011). Taking on this critique, more recent research has conceptually argued for the significance of place in the development and definition of a sustainability orientation in business (Mazutis et al., 2021; Shrivastava & Kennelly, 2013). Place in this context is more than the location (geographic coordinates) and the locale (natural and built attributes of a specific place). It includes a sense of place, defined as "the collection of meanings, beliefs, symbols, values, and feelings that individuals and groups associate with a particular locality" (Williams & Stewart, 1998). The latter has been studied across a range of fields and disciplines - from human geography and sociology to environmental psychology and urban planning (for an overview see Erdiaw-Kwasie & Basson, 2018). A sense of place describes the way that people and by extension organizations subjectively perceive and experience a specific place (Smith, 2011). Frantzeskaki, van Steenbergen & Stedman (2018) define sense of place as (usually) positive, emotional bond people form with their environment, where they become personally attached not so much to a place as such, but to the meaning they ascribe to this specific place (p. 1047). Gieryn (2000) goes so far as to argue that "[w]ithout naming, identification, or representation by ordinary people, a place is not a place" (p. 466). We understand sense of place as a combination of place-attachment and place-meaning (see also (Brehm, Eisenhauer & Stedman, 2013; Kudryavtsev, Krasny & Stedman, 2012), the former being the more functional bond between people (or in our case organizations) and place and the latter being the meaning that people ascribe to that place. Former research has shown that shared emotional bonds in a group towards a place can be important for mobilizing collective action towards sustainability (McPhearson, Iwaniec & Bai, 2016; Nevens et al., 2013). In the context of urban transition

research, Frantzeskaki et al. (2018) suggest sustainability challenges to become tangible in local contexts and that people experience motivation and self-efficacy especially when they get engaged in something that matters to them personally. Hence, a sense of belonging can be a useful starting point for a transformation as a strong sense of place can leverage the kind of stewardship and collective action needed to foster sustainability-oriented change (Hansen & Coenen, 2015). However, there is usually a multitude of meanings and attitudes held by different groups of actors in relation to a specific place (Stedman & Ingalls, 2014). As argued by Chapin & Knapp (2015) there may be a shared sense of place in general, but its inherent complexity and multiple meanings can lead to different attitudes and actions of different groups of actors or organizations. Existing research suggests that sense of place generally motivates or promotes a sustainability orientation of actors (Frantzeskaki et al., 2018) and business organizations (Shrivastava & Kennelly, 2013). Fuenfschilling & Truffer (2014) even suggest place to be able to change dominant logics in institutional incumbents. In this article, we focus on the meaning a place is given as part of the forming and characterization of a responsibility logic in business. In the following, we will look into different empirical cases of businesses, all located in the same region, in order to elaborate on the various types of relations that might exist between the sense of place and responsibility logic.

3. METHODOLOGY

3.1 Choice of cases

The sample of businesses was drawn from a local sustainability network in the Rhine-Ruhr region in the Western part of Germany. The region is marked by a long industrial history, especially in the textile industry, and experienced a big outflow of industry in the 1970s-

1990s. A shrinking economic prosperity brought along a dwindling population, industrial brownfields and vacant residential space as well as social challenges. In recent decades, however, the region has experienced a comeback with a very active civil society scene, creative spaces, research institutions, and with a continued high number of family-owned businesses or small and medium sized enterprises that have remained loyal to the region. Although very different in size, scope and sector, the businesses in our sample share a tradition (between 30 and 130 years) in the region. They were either founded there or have a branch in the region that is exclusively focused on doing business in that region. Most of them are classified as SME by size. The three larger corporations are self-reportedly oriented along the values of an SME rather than along the ones of a multinational company due to their organizational structure or due to being a family business. As the sample was drawn from the network "Future Circle Sustainability" (FCS) focusing on exchanging sustainability practices and engaging in joint action in the region, they all were presumed to be somewhat sustainability-oriented and to have a relation to place (although different in their attachment), which they all confirmed in the interviews. The FCS was jointly initiated by business and civil society in 2017 and has grown into a local network with about 25 active participating organizations. While the focus is on business sustainability, additional actors such as the three municipalities in the region, research institutions and civil society are part of the regular exchange and activities.

3.2 Qualitative research & content analysis

This piece of research was part of a larger research process with the FCS starting in 2018. Observations from many network meetings and conversations with their representatives provided the background knowledge. Due to the long-term commitment of the authors in the

network, trusted relationships were built with participants that allowed deeper insights into the different organizational worlds. As core to this study, we took 10 interviews with sustainability managers or owner managers of the business sample described in 3.1. Interviewees were assumed to represent their organization's perspective, unless they stated otherwise during the interview, which happened a couple of times. These situations offered interesting insights on internal conflicts and gaps between individual and organizational logics, so we took them into account in our findings. The interviews were taken in person or by phone, took about one hour, were recorded and transcribed. Questions in the semi-structured interviews were based on the two main categories being the organizational definition of sustainability and the sense of place. The interviews were analysed using a qualitative content analysis approach (Mayring, 2015). Since a responsibility logic is drawn from different overarching logics and relates them to one another, in a first round of analysis, we were specifically looking for references to conflicting rationales or examples of where conflict has been overcome, that is, rationales were reconciled successfully. Since logics also find their expression in concrete practices, we also searched for references to sustainable practices and their relation to the core business. In a second round of coding, we checked the material for references to place and for the role of place described in conflicts and in practices. In a final step, we identified recurring patterns of how place was described as part of the forming and characterization of different types of responsibility logics. The following is therefore not about re-constructing a responsibility logic or line of conflict per organization (which would be beyond the empirical evidence). Rather, the objective was to give insights into different lines of argumentation and to finally aggregate them in a heuristic overview of different types of responsibility logic – place relations that we found across our sample. We reference citations with "I" for Interviewee and the assigned numbers (1-10). In addition, we

refer to some of the meeting protocols from network meetings with “P” and the assigned number (1-12). Citations were translated from German to English by the authors.

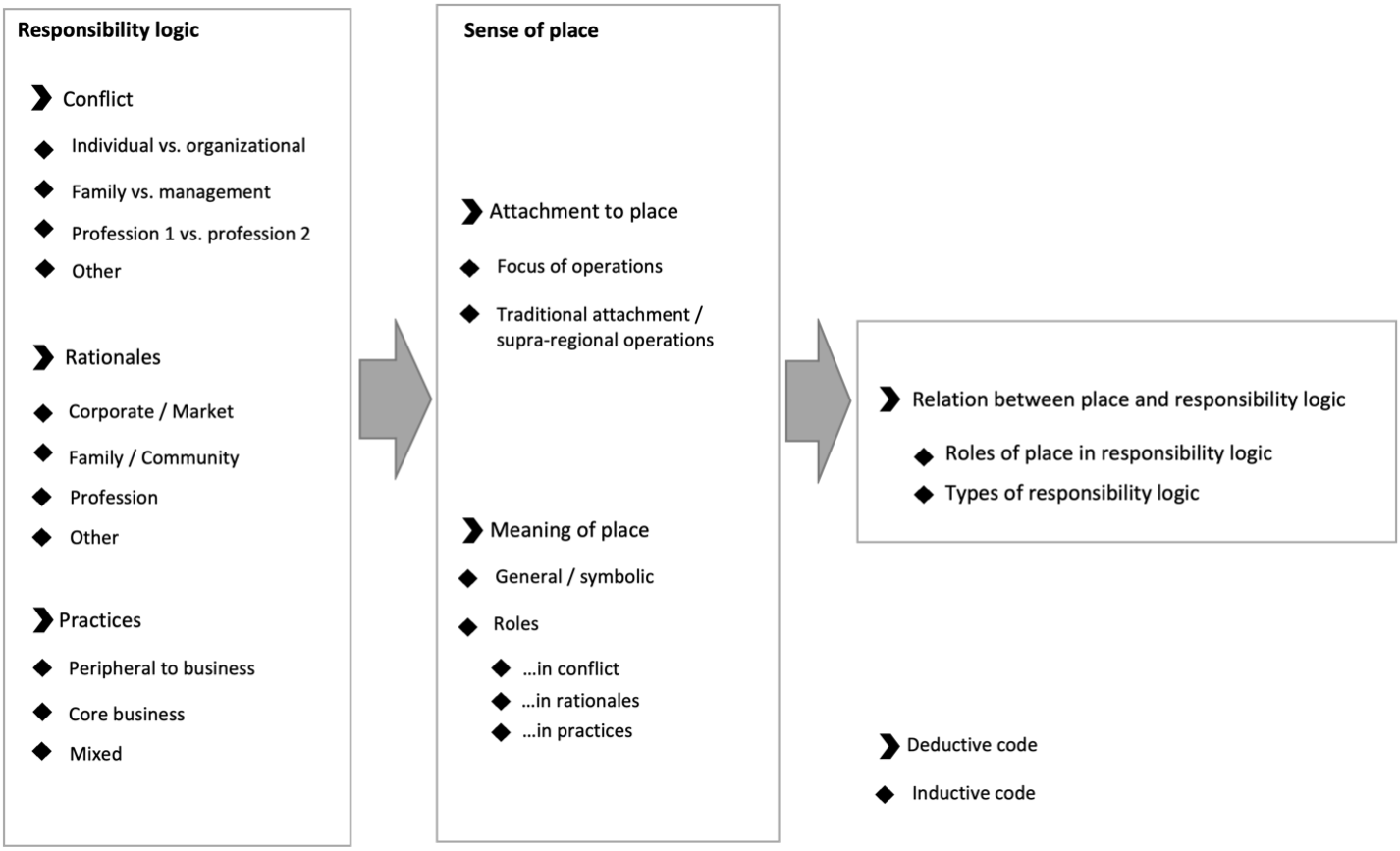

Fig 1. Overview of codes for data analysis. The analysis was done in three steps (from left to right). Deductive codes were complemented with inductive codes.

4. FINDINGS & ANALYSIS

In the following section, we start out with the conflicts described in reference to sustainability and from there examine underlying rationales and exemplary practices that were drawn on (4.1). Next, we take a closer look at the references made to place (4.2). Finally, we introduce a typology, in which we aggregate our findings into a heuristic of four different types of relations between responsibility logics and place in our sample (4.3).

4.1 Responsibility logics: Conflicting rationales and related practices

It is interesting to see the potpourri of different perspectives on the topic of sustainability amongst the various businesses that are part of the network. (I9)

Whereas all of the businesses in our study (self-reportedly) were sustainably oriented, interviewees reported very differently on the definition as well as the degree of acceptance and integration of sustainability throughout the organization. Central to almost all of the interviews were conflicts on different levels. Along with a high reported conflict in the organization, interviewees most often stressed cost-benefit considerations opposing sustainability practices. Here, sustainability practices focused mostly on activities peripheral to the core business. In contrast, the fewer ones reporting on sustainability having a central role in the organization, also saw "everyone in the organization involved" (I1, I6) with conflict being low or already overcome. High conflict went along with a clear differentiation between the corporate and the individual perspective. Interviews announced that "I will now speak from my individual perspective" (I3) or "saying this between us but this is of course not the official answer" (I5) or stating that "in my opinion much more would have to be done but the only thing I can do is further pushing for it" (I2). For some, conflict and justification for one's position are daily business (I5) as they are constantly "fighting windmills" (I5, I7) but have accepted that "having a difficult role is part of the job" (I5). Their roles as sustainability managers range from seeing oneself assigned with tasks "by coincidence" (I2) and "next to many other tasks" (I3) to feeling valued as "Mr Sustainability", reporting directly to the managing director (I1). A common theme here was the assertion that it lastly depends on individual decision-makers that "hold the flag high" (I7) and push the topic (I1, I2, I5, I6, I9) but that employees had to be taken along and considered drivers of innovation as well (I4).

Differences showed in how sustainability was argued for in the context of corporate structures and strategies. One prominent distinction revolved around the question of sustainability as a competitive factor or not. In this context, one interviewee stated that: “When we engage in sustainability activities, let’s say install e-charging stations for our employees - we don’t compete with other firms, it’s a different story when I for example raise the quality or lower the cost of my product” (I5). Being seen as an add-on, sustainability was depicted as an issue of “having the time to deal with extra activities” (I3) and as only feasible in a state of good economic performance (I8). In contrast, especially the larger companies stated that nowadays “the awareness is growing that we can no longer avoid disclosing what we use in our products, and developers are also becoming more aware that they can no longer buy anything without knowing what's in it” (I6) and that sustainability has evolved to become the core business strategy (I1). Across all interviews and irrespective of the conflicts described above, key arguments for a general responsibility drew on the family or the community. A common argument was that “these [family] businesses per se have an intergenerational scope and a stronger connection to people, especially to the local community” (I5). Some of them stated that the topic of sustainability was initially brought to the agenda of the organization by the family (who is in most cases not involved in daily operations) (I6, I7, I8). The three biggest corporations with a couple thousands of employees all asserted that in their values they would be comparable to an SME with a long tradition and a strong connection to the local community. A couple of times the notion of continuity - in management, in employees, in inter-organizational cooperation - came up as being key to the development of a shared sense of responsibility in the organization (I1, I6, I10). Related to that, a community-oriented argument was the perceived responsibility for the direct environment that resources are taken from (land, water, energy etc.) and the people that the organization is interacting

with (its employees, neighbours etc.). The interviewees referred to examples of practices in the organization to support their argumentation. Some interviewees exclusively related their societal engagement to add-on activities to the core business while others put an emphasis on the variety of practices implemented at the core of the organization's functioning. The former set of answers drew on examples ranging from donations to initiatives (I8) and sponsoring of events (I2) to promoting biodiversity and beekeeping on the firm's premises (I5). The same interviewees stated that "surely, there could be done more about the core business but that so far there was no time or financial resources to get there" (I8) or doubted that an energy intensive product as theirs could truly become more sustainable (I5). The set of answers referring to practices in the core business were often related to a reduction of negative impact in the context of a changing regulatory environment - through energy savings (I10), less waste production (I10), the reduction and compensation of CO2 emissions (I1, I6), divestment (I1), better working conditions for employees (I4). Others reported on the will of internal decision-makers to foster change beyond regulation or economic benefit. One interviewee described the situation of having decided against a certificate that was commonly regarded as sustainable but did not go far enough for the organization. In consequence, some customers turned away as they were explicitly looking for this certification (I4). To summarize, rationales for sustainability were commonly associated with logics of the family and the community. Notions of tradition and continuity as well as the will of the owner family played an important role across all interviews. Differences occurred mainly in the degree of internal conflict. Lines of conflict were described between the individual and the general organizational position, between different professional roles (e.g. sustainability manager vs. financial director) and between the owner family and the top management. Content-wise, the most common tension was seen between meeting financial demands and "doing good".

Only in a few cases, conflict was described as being almost non-existent as the organization had an explicit focus on sustainability and had gone through a learning process for many years (I1, I6).

4.2 Sense of place in responsibility logics

It is only in a shared place that you
experience community, vicinity &
real synergies. (P6)

Along our definition of sense of place outlined in 2.2, we assessed sense of place on the level of a general place-attachment and on the level of place-meaning. The attachment to place was described in two major ways: as (a) having the focus of business operations in the place as opposed to b) having a supra-regional business focus but being attached to place due to tradition. In both cases, the meaning of place was generally related to the realm of tradition, the family and the community, as "[w]e all have a responsibility to meet the challenges ahead (...) that's especially true for the place in which we consume resources, produce waste, where we recruit our employees - yes, we have a responsibility towards the local environment, the people, the community (I10)". The region itself was described as "structurally weak region that needs companies like us - as one of the biggest employer and as taxpayer" (I1) on the one hand but having a lot of sustainability potential as "all the family businesses and SMEs in the region per se operate in a more responsible manner than other companies" (I8) on the other hand. Another benefit of the region regarding sustainability was seen in the existence of research institutions and think tanks working on this matter (I2, I7). Finally, the region was seen as unique due to its history and the spirit of the people having emerged from it (I4) with their openness for exchange (I9) and their hands-on style of getting things done (I3). While the symbolic meaning of place related to the family and the community was quite similar

amongst interviewees, we found differences in the roles assigned to place in the context of sustainability efforts: First, place was described as the scenery for sustainability efforts, in which "sustainability practices are no competitive factor" (I5) but a way of doing good without interfering too much with the operational business (I8). Typical practices here included local biodiversity projects (I5) donations and supporting local initiatives (I8) as well as funding events (I5). Also, place in this context was said to enable joint activities and the bundling of synergies with other organizations (I5, I8). Examples included a joint e-mobility fleet between organizations or collective beekeeping across organizations together with the municipality. Second, place was referred to as the nexus of (partly conflicting) demands in business operations and sustainability. In these cases, business operations were by founding agreement or by the company's mission tightly or exclusively interwoven with the place and any form of responsibility was said to be - by definition - targeted at the place (I2, I3). Examples here included experimentation with new forms of energy production and supply (I2) as well as the support of "almost every local event and initiative" (I3). Third, place was seen as a platform for showcasing and multiplying sustainable engagement. Objectives here included inspiring others, sharing knowledge, building collaborative relationships and acting as a "lighthouse" (I1) as part of the larger organizational mission of taking over responsibility on many levels (I1, I6). Finally, place was referred to as the nucleus for transformative efforts - either because their "product was born from a transformative intent and as such will only profit from (local) sustainable change" (I9) or because of a personal conviction to be "pioneering a movement" (I10) or to have the responsibility even as a "small fish" to set statements locally and maybe convince other actors beyond the local context (I4). Analogies that came up in this context were "a wave that would spill over to other regions" (I4) and a "swinging pattern that would inspire others to follow suit" (I9). In summary, we found two

basic types of place attachment (having the business focus on the region versus having a business focus beyond the region - both stressing a traditional attachment to the place) and four roles assigned to place in the context of sustainability efforts (place as focus of sustainability, place as nexus between conflicting demands in business operations and sustainability, place as scaling platform for sustainability and place as nucleus for transformative efforts).

4.3 Typology: Place as coping mechanism

We started out from the definition of a responsibility logic as hybrid logic that emerges from a combination of various first-level logics. In section 4.1 we showed that many of the prevalent rationales for sustainability efforts are related to the family or the community. Differences, however, emerge from the degree that these are in conflict or reconciled with dominant corporate logics. Accordingly, in section 4.2 we saw that meanings attached to place in the context of sustainability vary especially regarding their role in coping with conflicting logics: Building on Pache & Santos (2013) we saw differences in the degree of integrating or combining various logics with each other as opposed to strategies of decoupling or compromising. For some, the place offers an opportunity to decouple or compromise conflicting logics by engaging in local sustainability practices that the management would be easier to convince of as there would be little conflict in terms of cost-benefit considerations (I8). For others, place helps combine various logics by providing the tangible level for a larger corporate mission. We took this insight - the place as a coping mechanism - as a hook to craft our typology with four types of relations between responsibility logic and place (Fig. 2). The axes of the matrix represent a) the reported degree of conflict around the theme of sustainability and b) the type of place attachment as being the focus of business operations

versus being the traditional location with supra-regional business operations. The quadrants then flesh out the roles assigned to place in combination with the coupling strategy employed. We heuristically assigned four labels to the types of responsibility logics that we identified in these combinations: Employing strategies of decoupling or compromising, “Philanthropists” and “Local compromisers” are more focused on responding to institutional demands than on trying to change them. In contrast, “Multipliers” and “Political agents” pursue combining strategies with differences in the degree to which the respective organizations take on a proactive role in fostering institutional change. Whereas the “Multipliers” use the place as a platform to foster inter-organizational learning, the “Political agents” see place as their home territory for lobbying and for embedding structural change. We will briefly describe each type in the following.

		Coping mechanism	
		Selective coupling / combining	*Decoupling / Compromising*
Place attachment	*Focus of business operations*	Place as *nucleus* for transformative objectives "Political agents"	Place as *nexus* of conflicting demands "Local compromisers"
	Traditional attachment	Place as *scaling platform* for sustainability "Multipliers"	Place as *scenery* for add-on activities "Philanthropists"
		Low	*High*
		Conflict	

Fig. 2. Matrix showing four different types of place - responsibility logic relations with the axes "Place attachment" and "Conflict / "Coupling mechanism". The four quadrants heuristically relate roles of place to types of responsibility logics.

4.3.1 Place as scenery for add-on activities: Philanthropists

At the intersection between high conflict and a place attachment characterized by supra-regional business operations, Philanthropists see the place as the main scenery for sustainability efforts. Organizational representatives in this category reported on a long tradition in the place but a tension between the owner family's value-driven push for sustainability and the external manager's focus on profitability, which then result in a decoupling of a family- or community-oriented focus in the place and an economic focus in the core business. To them, sustainability is not a competitive factor but a value-driven add-on activity. They are looking for collaborative relationships to learn from each other, exchange best practices and create local synergies. Practices are focused on place-based donations and volunteering.

4.3.2 Place as nexus of conflicting demands: Local compromisers

Also with high conflict but with a place attachment characterized as the focus of their business operations, local compromisers are by founding agreement tied to the region and by organizational structure exposed to different logics (for example market vs. state or market vs. social welfare). Following the definition of Pache & Santos (2013), compromising here refers to the purposeful enactment of some practices, allowing hybrids to satisfy symbolic concerns or a minimum standard that is expected by stakeholders. In these cases we saw a rather unstructured and selective way of coupling elements of logics in order to satisfy stakeholder demands aggregated in the place. Their representatives drew a clear distinction between their personal perspective and the current organizational orientation and stressed

the learning position that they see their organization in. Practices include sector-specific experiments and sponsoring of local events.

4.3.3 Place as scaling platform for sustainability: Multipliers

At the intersection of low reported conflict and a place attachment characterized by tradition with supra-regional business operations, organizations in this category were bigger companies that see the place as one (out of several) important platforms to perform and draw attention to their sustainability activities. They see their own mission in serving as a role model for other firms and as pushing the region to take on a "lighthouse position" (I1). Corporate sustainability is referred to as "chief matter" (I1) and "corporate mission" (I6), while practices reported stretch from local activities to the entire value chain. To them, no bigger company can afford to not take sustainability seriously nowadays (I6).

4.3.4 Place as nucleus for transformative objectives: Political agents

With low reported conflict and their business operations being mostly focused on the place, political agents see the place as nucleus for a transformative movement. The representatives are owner managers or highly engaged individuals in decision-making positions that not only see their company's responsibility in reducing their negative impact but in lobbying for structural change with their actions. Like Multipliers, Political Agents want to be frontrunners that push the region but see the place with all its facets in a more proactive and dynamic role than being the (more passive) platform that "needs firms like us" (I1).

5. DISCUSSION

We started out from the suggestion in the literature that there is a generally positive relation between businesses' sustainability orientation and sense of place (Guthey et al., 2014; Mazutis et al., 2021; Shrivastava & Kennelly, 2013). Our objective was to zoom in on this relation. In order to do so, we operationalized sustainability orientation as responsibility logic forming against the background of growing stakeholder expectations in the context of sustainability challenges (Radoynovska et al., 2020). We showed that place (in our sample) does in fact play a relevant role in the forming of a responsibility logic: With the responsibility logic evolving as a hybrid logic, we find that place plays a role in dealing with the multiple, partly conflicting, rationales that are part of this process. Therefore, we extend former research' general finding of the positive impact of sense of place on a business' sustainability orientation by thinking of it as a coping and learning process on two levels. On a first level, we see place to function as a coping mechanism (Pache & Santos, 2013) across different logics - be it as the scenery for decoupling responsible management from everyday business or be it the context, in which transformative efforts are taking their beginning. We described these and further recurring patterns of coping strategies in our typology. In our sample, some businesses stressing a long tradition and a high sense of responsibility in the region, were the ones that decoupled logics between place and the core business. Their sustainability orientation is high regarding the place only and logics driving this orientation are in conflict with the ones dominating the core business. In contrast, we found combining strategies to be reported on by two different groups of companies: by the small place-based organizations that are run by an owner manager with high individual ambitions as well as by the biggest businesses that are more exposed to a competitive market, in which integrating a rather encompassing responsibility management has become a benchmark in recent years. Both of

these types explicitly related their place-based sustainability engagement to a more encompassing organizational sustainability orientation. On this level, we draw the conclusion that place indeed seems to have a positive impact on place-based business sustainability (as suggested by Shrivastava & Kennelly, 2013) but that decoupling strategies related to place may even have an adverse effect on an overall sustainability orientation: The conflict between traditional corporate logics and those logics demanding a larger societal engagement are not reconciled but somewhat externalized as they are bundled in sustainability practices focused on the place. On a second level, however, former research has stressed the power of local collaboration (Hermelingmeier & Von Wirth, 2021), learning arenas (Augenstein et al., 2020) and collaborative relationships (Reay & Hinings, 2009) in sustainability transitions. And while some researchers describe the presence of multiple logics in an organization as a threat to its performance (Tracey et al., 2011), others even argue that logic multiplicity makes organizations more enduring, sustainable, and innovative (Jay, 2013; Kraatz & Block, 2008). Extrapolating the function of place as coping mechanism over time, we would assert that it can potentially open up processes of organizational transformation. Our typology is to be regarded as a snapshot of a status quo at the time of the study. However, a responsibility logic is by definition not static but rather constantly evolving and part of a larger learning process (Radoynovska et al., 2020). Its fluid nature implicates that place can be a catalyst not so much for a sustainability orientation per se, but for (inter-)organizational processes of learning and transformation. Place thus plays another important role as the common (geographical and symbolic) ground on which personal and collaborative relationships are based and from which stewardship and collective action for sustainability are leveraged (Frantzeskaki et al., 2018; Hansen & Coenen, 2015). As one member of the FCS noted, “I was always convinced that sustainability was all about the core business but learnt that joint

activities in the region can be a good starting point for those that are still at the outset of their learning journey" (P4). Our suggestion is that in its function as a coping mechanism, place with its meaning to an organization is constantly part of co-producing an organization's responsibility logic. Place-based collaboration and personal relationships are an additional place-related lever for new logics to gain more prevalence in the overall strategy and practice of the organization over time. There are some practical implications to our findings. First, we see potential in fostering the general sense of place and local engagement of business, not as leverage to a sustainability orientation per se but as a door opener to learning processes and organizational change. This, secondly, needs to be combined with the attempt to convince decision-makers and with the structural anchoring of responsible management and sustainability as a core theme in the organization, including the integration of employees of all levels into crafting new strategies and practices. A way to foster these processes, thirdly, is the initiation and support of local exchange and collaborative relationships as levers for learning. In terms of implications for future research, we want to point to some limitations of our study. Due to a limited number of cases, all situated in one region, our findings are not necessarily generalizable to other organizations and contexts. It would thus be interesting to apply our conceptual approach to a wider range of organizations, including different contexts and different organizational forms as our sample was quite specific with a high density of SME and family businesses. For our study, we assumed the professional representatives of the organizations to give insight into the general organizational logic. We recognize that this assumption holds only to a limited extent. It would therefore also be interesting to study single cases more in depth and to collect various perspectives from within one organization to get a better picture of an organizational logic. Furthermore, our analysis is a snapshot that would benefit from adding a time component and undertaking a similar study over a longer

time period to assess the transformative potential of place on responsibility logics. Finally, in our typology we heuristically show different relations between responsibility logics and place. However, organizations are always active components in producing and transforming places (be it consciously or unconsciously) (Guthey et al., 2014). Westman et al. (2020) have identified various types of place-building in that context. We assume interesting connections here and see potential in further studying the relation between sense of place, responsibility logics and roles in place-building: Which roles in place-building support the forming of a more transformative responsibility logic? How can a role of place as coping mechanism be fostered (for example by the municipality) in this context?

6. CONCLUSION

Former research found a positive relation between place and an organization's sustainability orientation. We employed an institutional logics' lens to shed more light on this relationship and to better understand the role of place in the forming of a business' responsibility logic. We found place to function as a coping mechanism, allowing businesses to deal with the different rationales and conflicts arising from the demands made to business in the context of sustainability challenges. We describe four heuristic roles of place in relation to a responsibility logic: Place as the scenery for add-on activities, place as the nexus of conflicting demands, place as the platform for scaling sustainability and place as the nucleus for transformative efforts. We extend this finding by the suggestion that place in its function as a coping mechanism with conflicting logics can open up processes of organizational learning and transformation in the long term.

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