Organizational Change towards Sustainability

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Organisational Change towards Sustainability: From Ambition to Impact

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Abstract

In this chapter it is argued that building a sustainability mindset amongst organisational members is a key mechanism to enable business models to transition to a transformative sustainable mode of operating in the world. The organisational sustainability literature calls for a mindset paradigm shift at organisational level yet says little about the learning processes that may underpin or enable such a mindset shift. A recursive model of learning is proposed that explains the building of a sustainability mindset and unpacks the behavioural competences. The emphasis on technological innovation has marginalised the individual and their agency in generating change around sustainable practice, yet the lack of competence or know-how is often identified as a key barrier to moving organisation-centric sustainability objectives forward. Building a sustainability mindset unpacks how systems thinking and collaborative behaviour manifest in situ and can enable sustainable transitions through practice, bridging individual and organisational level actions.

The trans-disciplinary field of sustainability science aims to bridge the boundaries between human and environmental systems to create a holistic understanding of this complex dynamic and its consequences for planetary and human wellbeing (Di Fabio and Rosen, 2018; Howard-Grenville and Lahneman, 2021). Brundtland's definition of sustainable development, as that which "meets the needs of the present without compromising the ability of the future generations to meet their needs too" has enjoyed preeminent status for nearly 30 years, but failure to address the multiple challenges outlined by the Brundtland report questions the value and application of this concept. Now, as then, what

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sustainability is, and how it can be achieved, might be the single most important question for society and organisations confronted with the existential crisis of climate and ecological emergency.

In this chapter, we aim to contribute to the growing body of work concerned with how human action on sustainability might address the environmental shifts we are experiencing. By taking a psychological lens to our examination of organisational level sustainability literature we discuss how mindsets form and evolve through situated learning drawing on theory of communities of practice. We suggest a sustainability mindset can operate as a bridge to transform organisational sustainability ambitions into positive sustainability actions and impacts. We begin by considering the definitional limitations that have impacted the organisational sustainability literature. We review key concepts underpinning organisational models of sustainability and the lack of attention paid to individual level research on sustainability competences necessary to move organisations more rapidly from ambition to implementation. Within the theoretical framework of communities of practice, we propose a circular and recursive model of learning that promotes a sustainability mindset that enables a dynamic interplay between the organisational member and their wider sustainability context leading to positive sustainability actions and employee performance.

The organisational literature on sustainability is expansive. Whilst it has its roots in systems thinking, the academic critique points to boundaries often set around the organisation that have limited theorisation (Williams, Philipp, Kennedy and Whiteman 2017) and practice (Hahn and Tampe, 2021). Howard-Grenville and Lahneman (2021) argue that organisational theories of change based on conceptualisations of organisational structures and strategy generated in more stable environmental conditions are now no longer fit for purpose. To address these criticisms, much of the contemporary organisational literature on sustainability has focused on adaptation and resilience to bring greater attention to the dynamics within eco-systems and a recognition of the near and far time frames. Adaptation refers to how organisations are changing to meet shifting external demands and thus the focus is on this process/s and how it is/they are integrated across an organisation (Schein, 1983). Resilience by contrast is understood as capabilities to and outcomes of adaptation (Howard-Grenville and Lahneman, 2021; Walker et al 2006). Resilience bridges the

conceptual divide between approaches toward mitigation i.e., reducing emissions and levels of greenhouse gases, and adaptation i.e., adapting to the external changes already happening. However, the role of the individual is often marginalised because of the focus on technological systems and organisational structures. Disciplinary silos mean that psychological perspectives of sustainable change are not captured within organisational models. However, the organisation is also a social structure which provides a critical site for learning and experimentation and as such a holistic understanding of sustainable transitions requires greater multilevel theoretical integration. We aim to enrich the conceptualisation of organisational sustainability by highlighting the role of the individual as a learner and the process of learning in converting organisational sustainability ambition into impact.

What is Organisational Sustainability?

The expansive scope of organisational sustainability has made consensus around a single definition illusive. A useful anchoring point for much of the research since the 1990s has been 'Our Common Future' or the Brundtland Report (World Commission on Environment and Development, 1987) in which sustainability is identified in terms of an ability to meet four challenges arising from human degradation of the world's ecosystem through the growing world population and consumption behaviours:

The challenge of,

1. *Depletion of natural resources e.g., energy, waste, land, material*
2. *Equitable access to constrained resources*
3. *Inter and Intra-generational equity to resources and associated opportunities and risks*
4. *Progressive transformation of the economy and society in support of the health and wellbeing of the natural and social world*

However, since this seminal work there has been a plethora of interpretations of the concept of sustainability. In a bid to generate greater clarity and coherence around the definition of the concept Meuer, Koelbel and Hoffman (2020) reviewed the way in which sustainability has been defined in the academic literature over the past 3 decades. Based on a systematic review of the organisational sustainability literature between 1987 and 2018

they identified a set of criteria refining the concept of sustainability. They identified 33 definitions and based on content analysis identified two types of definitions and three key attributes that distinguished between the definitions. The two types were those that a) identify the organisational design (i.e., practices, processes, strategies) and those that b) identify how an organisation does business (i.e., the approach or paradigm). The three attributes of organisational sustainability were:

1. The level of ambition, to enhance or create a change, for example where efforts to innovate may be focused on improving or adapting processes and products so they become more sustainable, whilst at the more ambitious extreme organisations are concerned with value creation through sustainable action i.e., redefining the business model.
2. The level of integration, between the internal functions and processes within organisations whereby environmental concerns become part of the core business activity. Here a distinction is often drawn between organisations that separate social or environmental interventions from other work processes compared with those that integrate sustainability into their vision and mission for the organisation.
3. Degree of specificity of sustainable development in terms of whether the organisation captures all 4 of Brundtland's challenges (low specificity) or only one or two (high specificity and thus a restrictive definition). Differing levels of specificity are often reflected in the expansion of sub-themes in the sustainability field, for example with research focusing on social aspects through Corporate Social Responsibility (CSR) and a focus on climate through Environmental Management.

Meuer et al., (2020) suggest that the lack of conceptual clarity has hampered theoretical advances and consequently limited evidence-based recommendations to support organisational interventions. The implication of this definitional framework is that, in using these criteria it is possible to map an organisation in terms of its relative position; doing so can aid a firm's understanding of its progress, or lack of. It can help an organisation identify its level of ambition, for example, the extent to which it is concerned with adaptation of its products and processes to external factors through innovation, and/or is

building resilience and the capacity to adapt through changing the value proposition. Further, the criteria correspond to areas of empirical evidence, thereby providing a framework for the greater integration of the empirical evidence with the conceptualisation of sustainability. For example, ambitious goals are argued to be required to achieve greater impact (GRI UN Global Compact, & WBSCD 2015); using Meuer et al's definitional framework would guide scholars to examine how ambition is impacted by organisational design, internal integration and specificity of action. Greater understanding of the criteria defining sustainability aids our consideration of how progress might be measured and underlines the need for new and more nuanced measures (Dyllick and Muff, 2016).

Over the years conceptualisations of sustainability have become more complex in attempting to capture the idea of creating value beyond that of financial stakeholders. This conceptualisation requires going beyond the minimization of harm, developing greater systems thinking, proactive engagement of stakeholders beyond organisational boundaries (e.g., consumers, customers, social groups, activists, NGO) and embedding sustainability led decision-making into the core of why an organisation exists and how it operates. This is a challenge that organisations have on the whole failed to live up to (Bannerjee, 2008; 2011).

Organisational research on sustainability is embedded within systems thinking that recognises the connectedness between the organisation and the environment in which it operates, the inter-dependency between the health of the organisation and the natural and social resources in which the organisation is embedded (Gladwin, Kennelly and Krause, 1995; Whiteman, Walker and Perego 2013; Starik and Rands, 1995). From a systems perspective sustainability can be understood as 'a normative concept referring to an ideal state of being in which humans are able to flourish within ecological thresholds of the planet alongside other living entities for perpetuity' (Williams et al 2017: 12; Ehrenfeld, 2012). As such sustainability is dynamic, in a state of flux and co-evolution with the actors within the environment in which it operates. This environment may be spatially local or, as in the case of multinational enterprises (MNEs) operate and impact globally. Williams et al (2017: 13) argue that sustainability reflects the 'ability of systems to persist, adapt, transform and transition in the face of constantly changing conditions'. Despite this dynamic and embedded conceptualisation, sustainability in organisations has often failed to reach, both in practice and in theory, such a fully integrated or multi-level understanding. This failure

may be due to the necessity to broaden the systems boundary beyond that typically considered by traditional management theories. For example, Gray (2010: 48) offers a systems-based definition of sustainability as follows 'sustainability is a systems-based concept and, environmentally at least, only begins to make any sense at the level of ecosystems and is probably difficult to really conceptualise at anything below planetary or species levels'. However, traditional management theories have remained linear in their logic (Williams et al 2017) and overly reliant on assumptions of external market stability. The environment is understood as a pool of resources that the organisation exploits and converts into outputs to the environment. Resource-based theories of the firm focus on identification and exploitation of resources, theories of competitive advantage focus on winning market position through the control of resources, whilst institutional theory focuses on isomorphism or convergence in organisational practice as the legitimizing force necessary to organisational survival. While social and environmental concerns have been added to financial outcomes as indicators to distinguish sustainable organisations, debate continues over the primacy of financial outcomes often depicted in the Greenwashing debates (Delmas and Burbano, 2011). A further critique of the lack of systemic consideration is the focus on short-term returns for organisations at the expense of considering longer-term socio-environmental impacts and how they in fact underpin the conditions for organisational resilience and performance.

The more recent interpretation of the theory of competitive advantage has shifted organisation framing of environmental responses from being a cost to a source of strategic advantage because of the economic efficiencies and reputational enhancement created (Porter and Kramer, 2002). Whilst this framing still drives organisational action towards sustainability on the basis of financial considerations it represents a step forward from more problematic exploitative approaches. Over the past 20 years, organisational sustainability has matured becoming progressively proactive, with the development of new Business Models for Sustainability that come closer to encapsulating the systems thinking inherent in the Brundtland report. Notwithstanding the limitations, the extant research on organisational sustainability provides valuable contributions and a platform for further work.

Organisational Models of Sustainability: Transforming from reducing harm to creating value through sustainable organisations

The innovation literature has been a primary source of insight on how organisations have approached sustainability challenges. This field of study grew out of engineering-based innovation and whilst initially highly technology based, it is more accurate to view in terms of innovation of socio-technical systems in recognition of the people aspects of technology delivery. Eco-innovation focused on minimizing an organisation's impact on the environment through technological advances to changing products and production processes. As such, the focus was traditionally on minimizing harm through incremental improvements in the production processes and technology already in use, enhancing employee skills in the use of new technologies and processes (for a review see Adams et al 2012). Many organisations are still working within this more constrained conceptualisation of sustainability, but Adam's et al argue that while 'these approaches make an important contribution at the firm-level, their impact is limited… and insufficient to address the sustainability challenge' for whilst they may increase the efficiency of an organisation and its negative impact, these benefits may be off-set by higher levels of growth, what Carrillo-Hermonsilla et al., (2010) refer to as the rebound effect. Additionally, the focus on isolated innovation efficiency of processes or products/services ignores the systematic nature of sustainability.

Given these limitations, organisationally driven sustainability requires transformational change that is consistent with holistic and systemic conceptualisations of sustainability. Research on Sustainable Business Models reflects both a paradigm shift with regards to why an organisation exists i.e., its purpose and identifies relational based features of organisational practice as being fundamental to the theoretical extensions required to support the challenges of sustainable organisation. In the sections that follow we consider the key features proposed in the literature and the implications these have for a research agenda that incorporates a greater understanding of a relational context for transformation.

<u>Sustainable Organisations</u>

A burgeoning literature on Sustainable Business Models captures a paradigm shift from business as usual to a reframing of why an organisation exists and how it operates. The thrust of these models is to reframe sustainability from a business model based on responding to external market pressures that legitimize sustainability practices for competitive advantage, to one that gives equal saliency to triple bottom line (TBL) priorities of people, planet and profit (Elkington, 1994). These models increase the ambition of organisational sustainability in terms of one that adopts a broad and all-encompassing approach and actively seeks to create shared value for business, society, and nature from sustainability (Dyllick and Muff, 2016).

These models are focused on enhancing the resilience of the whole (socio-ecological) system (Adams et al p35); and focused more on resilience than adaption where resilience refers to the capacity of an organisation to absorb shocks and adjust to ongoing changes within the eco-system in which it operates (Westley et al 2011) whether on a geographically local or global scale (Folke et al., 2011; Steffen et al., 2015). This greater systemic conceptualisation of sustainability encourages and is more amenable to the growing trans-disciplinary nature of Sustainability Science (Di Fabio, 2017). There is strong alignment with theories in ecology that identify change in planetary systems as a constant (Howard-Grenville and Lahneman, 2021), with the biophysical world relying on a dynamic set of properties to foster adaptation, renewal, transformability, and thus resilience in ecosystems over time (Holling, 2001; Walker et al., 2004).

Whilst the Triple Bottom Line (TBL) paradigm shifts (Elkington, 1994) from a focus on financial outcomes as the dominant purpose, mission and measure of performance, to one that gives people and planet equal saliency it is not without challenges (Bertens and Statema, 2011; George, McGahan and Prabhu 2012; Esslinger, 2011, Stubbs and Cocklin, 2008; Nosratabadi, Mosavi, Shamshirband, Zavadskas, Rakotonirainy and Chau 2019). The empirical evidence remains contentious regarding the attainment of equality between these three domains (Berkin et al 2009; Adams et al 2012; Christina, Dainty, Daniels, Tregaskis, Waterson 2017), although Adams et al identify a common set of organisational level characteristics that are associated with the Triple Bottom Line aspiration. These include the integration of planetary and social concerns with the purpose of the organisation; use of planetary and social outcomes as organisational performance indicators; proactive

engagement with the interests of planetary and social stakeholders alongside shareholders; proactive stakeholder engagement, organisational cultural and structural mechanisms that leverage sustainability leaders and change agents; and systems thinking not only inside the organisation, but in terms of how the organisation is embedded within its wider environment. Triple Bottom Line models could be conceived as an evolution of traditional business models in that they are largely concerned with extending the range of performance indicators to social and environmental concerns, allowing a combined focus on efficiency and innovation. This means that traditional structural and cultural tools for enhanced organisational performance remain relevant. For example, the power of aligning organisational priorities with stakeholder interests to improve performance, and internal alignment between production processes and organisational and employee learning and capacity building are necessary to change performance outcomes (Christina et al 2017). However, Triple Bottom Line models also bring into focus a more novel mechanism of transformation which is the meaningfulness of organisational goals to individual stakeholders, whether these be internal stakeholders such as the employee, line manager, senior manager, or external stakeholders such as the customer, consumer or citizen.

Triple bottom line thinking is also apparent in how organisations approach process innovation, one of the more pronounced shifts evidenced is how resources are managed through the move to closed-loop manufacturing and the extension of circular economy principles to organisation practice. The closed-loop borrows from biological thinking based on the reduction of waste and reuse of high quality bi-products of the production process. Advanced manufacturing spearheaded closed-loop innovation. Correspondingly, the circular economy concept signals a move from conventional linear economic thinking. Sometimes referred to as 'take-make-use-destroy' where the social and environmental consequences and resource used is not factored in, yet is how business is done and how organisations and supply chains operate (Govindan and Hassanagic, 2018:278; Jawahir and Bradley, 2016). Circular economy thinking explicitly manages a product function in a closed loop whereby there is less reliance on the need for new raw materials and the outputs from the product and the production process can be reused (Kok, Wurpel and Ten Wolde, 2013) and where both environmental protection and social well-being are part of the economic system (Jawahir and Bradley, 2016). The circular economy principles are reflected in organisational

practices based on the '3Rs' of reduce-reuse-recycle (Yuan, Bi and Moriguichi, 2006) with evidence demonstrating the reduction in cost and energy use for recycling is significantly less compared to the traditional linear product life cycle, and even greater for reuse. The need to innovate and build human competencies around re-using materials and recycling waste are further argued as a key driver of quality work and jobs and thus part of the policy agenda for advocating economic growth through green jobs and a green economy (Govindan and Hasanagic, 2018; MacArthur, 2012).

More recently there have been conceptualisations of regenerative models. Taking a trans-interdisciplinary approach to sustainability, researchers are beginning to introduce ideas from urban planning and the built environment, where organisations have, at their core, value propositions concerned with the generation of value to society – socially and environmentally. Regenerative thinking offers an outside-in systems thinking lens to how organisations relate to the environment (du Plessis, 2012; Folke et al 2010; Zhang and Wu, 2015; Slawinski et al 2019; Hahn and Tampe, 2021). Whilst many of these models are normative and aspirational, they nevertheless provide conceptual tools on the relational context that can help the research community theorise, assess and evaluate sustainability practice.

Despite the developments on Sustainable Business Models, a core critique remains the perpetual linear and static nature of much of the conceptualisation or resulting practice. Organisational research and theorisation on sustainability has its origins in systems thinking, as illustrated above, that recognises the role of firms in the consumption and extraction from the natural world and the local or global environment in which the firm operates. However, translating conceptualisations of sustainability into strategies for action have tended to lead to silos between bodies of research and practice and an overwhelming and fragmented literature base (for reviews see Luo, Tang, Chen, Li and Luo (2020; Gond, Akremi, Swaen and Babu, 2017). Successive reviews have consistently identified siloed sub-themes and definitions. There is now growing recognition that to move beyond actions that limit harm to the natural world to more rapid responses to the climate emergency requires a step change evolution in organisational action. Building on the calls for a stronger role for psychology within sustainability science (Di Fabio and Rosen, 2018; Di Fabio, 2017) we offer, in the next section, a framework based on individual skills and relational competencies that

are developed through communities of practice as a tool for bridging an organisation's sustainability ambition with impact.

Bridging Sustainability Ambition and Impact through Mindsets and Communities of Practice

Research attempting to define the nature of sustainability offers clarity for individuals in organisations in that it identifies the need to consider sustainability actions in a systems framework that looks both outward from the organisations as well as inward on internal processes. This requires recognition of the interplay and inter-dependencies between macro (global-local scale), meso (intra- and inter-organisational structure and process) and micro (individual level psycho-social processes) level constructs. The research on new models of sustainable organisation has identified organisational structure and process change as fundamental but highlights challenges in affecting this change both upwards (macro level) and downwards (micro level). Core to new sustainable organisational models is the ambition to shift to a value creating purpose of why organisations exist that is derived from a sustainability ethos in which economic, social and ecological concerns are equitable, synergistic and resource positive.

As organisations are social entities the individual is a critical decision maker and behaviour change agent. However, the lack of competence or know-how is often identified as a key barrier to moving organisation-centric sustainability objectives forward (Hengst, Jarzabkowski, Hoegl, and Muethel, 2020; Demers and Gond, 2020). We suggest that it is important to consider both what and how individual competencies are created in tandem to better understand sustainable practice. We draw on communities of practice thinking which conceptualises how individuals learn as a social process (Lave and Wenger,1991). Through communities of practice, we suggest individuals create and develop a sustainability mindset that offers an important bridge between organisational ambition and action (Figure 1).

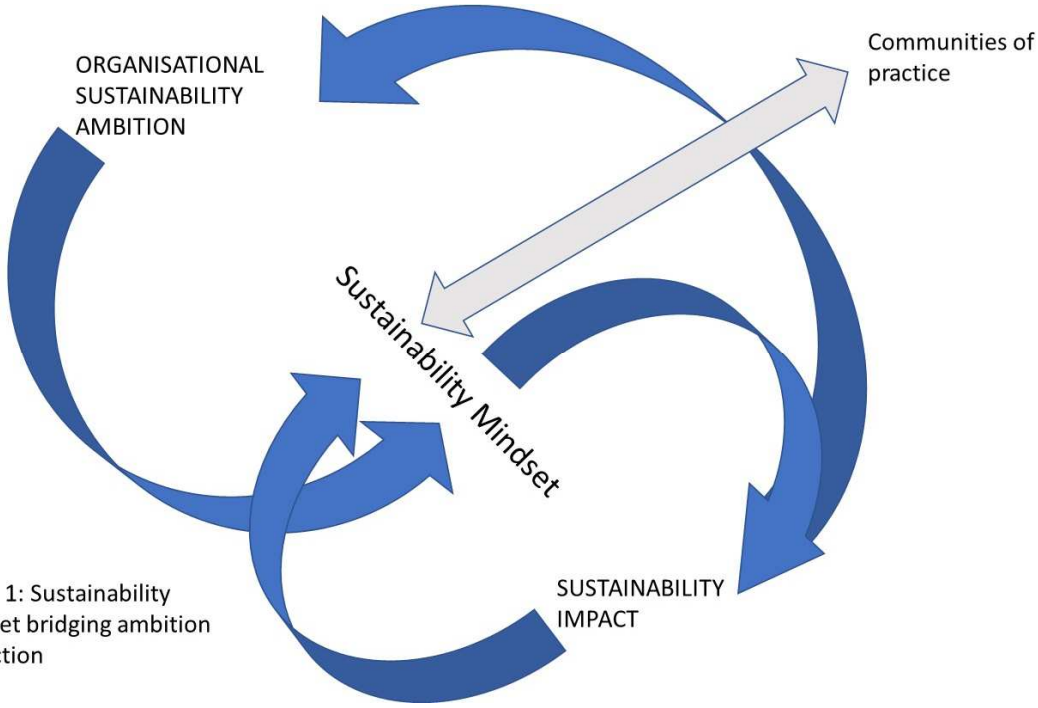

Figure 1: Sustainability Mindset bridging ambition and action

Communities of practice arise through *collaborative effort* over time to bring together individuals across a domain of practice. Communities attract diverse knowledge bases and skill sets but are tied to each other through a common endeavour or domain of practice, such as sustainability. But importantly the community of practice is not a task focused group or narrowly defined by a task, and as such a community is not the ownership of an organisation or outside entity but instead is negotiated and constituted of social relationships that coalesce around a domain. The communities of practice enable members to learn through experience and relationships with others. Through communities of practice members co-create meaning, new understandings and identity. The community of practice goes beyond thinking of learning as the identification and acquisition of information. Knowledge embedded and embodied within experiences and practices is the foci for learning. New members on the periphery of a community learn from the core members, bringing in new ideas, thinking, and values and learn from core members. The dynamic and social context of learning provides an ideal vehicle for individuals in organisations to create the values, identity and know-how to support organisational sustainability goals and translate these into practice with impact.

To further elaborate on how communities of practices enable individuals in organisations to move sustainability practice forward we suggest communities of practice

are critical in creating mindset shifts. A mindset can be defined as a 'combination of perceptions, attitudes, beliefs, thoughts, dispositions, which can explain personal actions and/or choices. Thus, a mindset is reflective of the identity of individuals – how they perceive themselves – which in turn influences how they interact with others, and they perceive their environment and responsibilities' (Nadelson, Albritton, Couture, Green, Lyless, and Shaw, 2020: 1). Situating the mindset concept within the sustainability domain we suggest that sustainability mindset reflect an understanding of the mutual interdependencies between the components of the triple bottom line, and the strategies and actions pursued by the individual reflect the process through which a sustainability mindset forms and evolves – what and how. Sustainability proponents argue that changing from a focus on eco-innovations for business and financial returns to creating value through addressing sustainability concerns (Dyllick and Muff, 2016) and regenerative resource thinking (Hahn and Tampe, 2021) requires mindset change at individual and organisational level. Systems thinking and collaborative behaviours are core to how those mindsets shift in the sustainability domain.

A sustainability mindset grows through systems thinking, which requires individuals to understand how the organisation fits within its wider environment in relation to the impact of decisions around what and how products or services are created, produced and used across their entire life cycle. It is this understanding that enables the individual to seek information and solutions amongst the relevant stakeholders (Borland et al 2016; Ryan et al 2012). However, as sustainability solutions and knowledge as still developing and growing then communities of practice offer a learning route that connects individuals across disciplines and enables the joint construction of the meaning and value of that knowledge to joint concerns. Strategies that enable and support openness to enquiry and to transdisciplinary learning (Dibrell et al 2015) can thus enhance systems thinking and communities of practice can provide a vehicle for learning in this regard.

A sustainability mindset demands an understanding the scale complexity of the environment in which the firm embeds as this is core to conceptualisations of sustainability. This suggests that individuals need to use strategies and practices that enable them to access a wide set of stakeholder interests - from employees, to customers, to suppliers, to policy actors. Bridging these different, often contested, interests require cognitive frames

that are sufficiently malleable to the integration of divergent interests (Tregaskis and Almond, 2018). For international organisations, or organisations embedded within global production networks and policy networks, transnational scale issues bring to the fore the need to understand different cultural social and institutional norms (Tregaskis and Almond, 2018). Cultural awareness and exposure provide an opportunity for actors to integrate embedded and embodied cultural knowledge into their cognitive frames for sense-making and problem solving (Tregaskis, 2003; Tregaskis et al 2010). Communities of practice can scale these knowledge landscapes, coalescing around a sustainability domain of practice.

Relationality is a core part of a sustainable mindset in terms of making connections between others, valuing outcomes and getting others to see viewpoints. Understanding the value of different types of expertise is more likely to encourage actors to create relationships and networks that support collaboration (Waddock, 2007). Empowering individuals to be able to take responsibility, to innovate and experiment supports collaboration and mindset growth (Dweck, 2016). Collaborative problem-solving involving organisationally located expertise combined with external stakeholder interests and expertise is empirically documented in the eco-innovation literature as associated with positive environmental impacts and organisational sustainability performance (Verhulst and Van Doorsselaer, 2015; Dangelico, Pujari and Pontrandolfo, 2017). However, there is less evidence of this collaborative capability for sustainability objectives across non-technical or beyond one-off interventions, or across different types of organisational actors. Having a holistic perspective on the organisation's processes and functions for positive sustainability outcomes (Gluch et al, 2009), arguably requires collaborative skills amongst the whole of the workforce and not just within pockets of the organisation via specific groups of employees or a defined innovation project or industry (Dweck, 2016). Looking beyond traditional conceptions of stakeholders to consider others, for example consumers of services or citizens, widens our understanding of the sustainability impacts. Looking beyond boundaries of the organisation and reframing how value is co-created with external stakeholders becomes imperative. Collaborative engagement with stakeholders is therefore not only confined to the acquisition of knowledge and know-how, or the sharing of information with stakeholders for instructional or educational purposes, but it can be about fundamental co-creation of new knowledge in line with regenerative resource cognitive

reframing. Learning through communities of practice provides a route for mindset growth in this regard.

A future orientation and ability to envision future scenarios is a central critique of much of the economic driven organisational based action. By implication sustainability mindsets will bring temporal dimensions to the fore in problem solving and planning (de Haan, 2006; Wiek et al 2011), as such future orientation is argued as a key capacity needed by individuals i.e. the 'capacity to deal with uncertainty and future prognoses, expectations and plans….being able to think beyond the present' (Haan, 2006:22). And to consider future orientations within a much longer-time frame than is often the case in much organisational strategy and planning. Because communities of practice do not belong to an individual organisation, they have the potential to address sustainability practice that is more future orientated and as such operate as a learning resource for both individuals and organisations to address near and far sustainability practice concerns.

The understanding of this new sustainability mindset means a complex interplay between the sustainability framing at an organisational/institutional level and how individuals within and between organisations are responding to this. This difficulty is exemplified by individuals reverting back to market and profit based motives at work when facing tensions with managing sustainability objectives (Lo, Peters and Kok, 2012; Wright and Nyberg, 2017; Kok, De Bakker and Groenewegen, 2019). There is a plurality of mindsets at play in modern organisations and this is exacerbated by sustainability agendas (Besharov and Smith, 2014). This results in 'tough moral reasoning' to make sense of the consequences of going beyond the regulatory compliance to be truly environmentally sustainable but at the cost of losing competitive advantages (Hengst *et al.*, 2020, p.258). This is important as mindsets are sources of legitimacy for individuals that 'provide a sense of order and ontological security' (Thornton and Ocasio, 2008, p.108), allowing individuals to make sense of these tensions through their pre-existing assumptions (Maitlis and Christianson, 2014). As organisations have to balance multiple objectives such as 'people, profit and planet', the associated mindsets create tension between the different ways of thinking about sustainability as there is a perpetual tension between market (financial) based thinking and other 'sustainability' worldviews at work (civic/social/ecological) (Wright and Nyberg, 2017; Kok, De Bakker and Groenewegen, 2019; Demers and Gond, 2020; Franco-Torres, Rogers

and Ugarelli, 2020; Hengst *et al.*, 2020; Luo *et al.*, 2020). The tension between a market-based and the heterogenous types of sustainability-based thinking seem to constantly come into conflict. Groups within and between organisations enacted different logics that have been derived from different 'cultural toolkits', and these 'underlying worlds' are justified through the moral stance of their logic (Demers and Gond, 2020). When confronted with environmental sustainability phenomena individuals fall back into their familiar logics, reinforced by their organisational (sub)culture, to legitimise their choices and render their experiences meaningful (Thornton and Ocasio, 2008; Smith and Tracey, 2016; Kok, De Bakker and Groenewegen, 2019). The result of this can be seen in relation to sustainability tensions as individuals engage in legitimising strategies in different contexts that exploit their own existing competencies (Hengst *et al.*, 2020).

Developing capabilities, competencies, and capacity to managing these tensions and providing a space that allows individuals in organisations the scope to make and implement sustainability-based decisions that aren't stymied by the financial objectives remains a challenge; these objectives have historically overwhelmed the progress of sustainability thinking within organisations.

Conclusions

We suggest that sustainability communities of practice are an important vehicle for learning processes through which individuals can develop and grow their sustainability mindset. In turn, a sustainability mindset helps bridge organisational ambition with impactful action. The organisational sustainability literature calls for a mindset paradigm shift at organisational level but says little about the learning processes that may underpin or enable such a mindset shift. Through unpacking the organisational sustainability debate and empirical evidence it is apparent that innovation in the sustainability domain is dependent on the construction of new knowledge that involves meaning making in a multi-level, multi-disciplinary situated context. Given this, a fruitful avenue for further research is understanding the constitution, construction and growth of a sustainability mindset at individual, group and organisational levels. Communities of practice coalesce around sustainability interests and permeate organisational and inter-disciplinary boundaries to offer a space for sustainability mindset growth. However, there are tensions in the process

of mindset formation that are not clearly understood. Are there triggers that tip the balance in how individuals evaluate sustainable value and the logics they draw upon to legitimise their actions? How do sustainability communities of practice form, how do individuals access them and to what extent are these driven by personal values and relationships or/and professional values and relationships? Allied to mindset growth, how does the process of identity formation challenge or resolve conflict in personal and professional values? Organisations have focused on technological solutions to sustainable transitions, with little attention paid to the capacity and agency of the individual. However, taking a mindset perspective brings to the fore a systemic understanding of the role of the individual and the attitudinal, social, motivational, and behavioural capacities and strategies required to underpin a paradigm shift in the sustainability domain.

References

Adams, R., Jeanrenaud, S., Bessant, J., Overy, P. and Denyer, D., (2016). Innovating for sustainability: A systematic review of the body of knowledge. Network for Business Sustainability.

Banerjee, S. B. (2008). Corporate social responsibility: The good, the bad and the ugly. Critical sociology, 34(1), 51-79.

Banerjee, S. B. (2011). Embedding sustainability across the organization: A critical perspective. Academy of Management Learning & Education, 10(4), 719-731.

Bertens, C. and Statema, H. (2011). Business Models of eco-innovations: an exploratory study into the value network of the business models of eco-innovation and some Dutch case studies: Project commissioned by Dutch Ministry of Infrastructure and Environment.

Birkin, F., Polesie, T. and Lewis, L. (2009). A new business model for sustainable development: an exploratory study using the theory of constraints in Nordic organizations. Business Strategy and the Environment, 18, 277-290.

Broland, H., Ambrosini, V., Lindgreen, A., and Vanhamme, J. (2016). Building theory at the intersection of ecological sustainability and strategic management. Journal of Business Ethics, 135, 2:293-307.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. Organization science, 2(1), 40-57.

Carrillo-Hermosilla, J., Del Rio, P., and Könnölä, T. 2010). Diversity of econ-innovation: reflections from selected case studies. Journal of Cleaner Production, 18 (10/11), 1073-1083.

Dangelico, R. M., Pontrandolfo, P., and Pujari, D. (2013). Developing sustainable new products in the textile and upholstered furniture industries.: Role of external integrative capabilities. Journal of Production Innovation Management, 30 ,4: 642-658.

De Haan, G. (2006). The BLK '21' programme in Germany: a 'Gestaltungskometenz'-based model of education for sustainable development. Environmental Education Research, 12, 1:19-32.

Delmas and Burbano (2011) "The Drivers of Greenwashing", California Management Review, 54, 1: 64-87

Demers, C. and Gond, J-P. (2020) The moral microfoundations of institutional complexity: sustainability implementation as compromise-making at an oil sands company. Organization Studies, 41, 4, 561-586.

Du Plessis, C. (2021). Towards a regenerative paradigm for the built environment. Building Research & Information, 40, 1: 7-22.

Di Fabio, A. and Rosen, M. A. (2018) Opening the Black Box of Psychological Processes in the Science of Sustainable Development: A New Frontier. European Journal of Sustainable Development, 2: 4, 47: 1-5.

Dibrell, C., Craig, B., Kim, J., and Johnson, A. (2015).Establishing how natural environmental competency, organisational social consciousness and innovativeness relate. Journal of Business Ethics, 127, 3, 591-605.

du Plessis C (2012) Towards a regenerative paradigm for the built environment. Building Research & Information 40(1): 7–22.

Du Plessis, C., and Cole R. J. (2011). Motivating change: shifting the paradigm. Building Research & Information, 39, 5: 436-449.

Dweck, C. (2016). What having a 'growth mindset' actually means. Harvard Business Review, Jan 13.

Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. California management review, 36(2), 90-100.

Esslinger, H. (2011). Sustainable Design: beyond the innovation-driven business model. Journal of Production Innovation Management, 28(3): 401-404.

Folke C, Carpenter SR, Walker B, et al. (2010) Resilience thinking: Integrating resilience, adaptability and transformability. Ecology and Society 15(4): art20.

Gladwin,T. N., Kennelly, J. J. and Krause, T. S. (1995). Shifting paradigms for sustainability development: Implications for management theory and research. Academy of Management Review, 20(4): 874-907.

Gluch, P., Gustafsson, M, and Thuvander, L, (2009). An absorptive capacity model for green innovation and performance in the construction industry. Construction Management and Economics, 27, 2:451-464.

Gond, J-P, Akremi, A. E., Swaen, V. and Babu, N. (2017). The psychological microfoundations of corporate social responsibility: a person-centric systematic review. Journal of Organizational Behaviour, 38, 225-246.

Hengst, I-A, Jarzabkowski, P., Hoegl, M. ad Muethel, M. (2020). Strategies Legitimate in Action. Academy of Management Journal, 63, 1, 246-271.

Hoffman, A. J. (2021) Business education as if people and the planet really matter. Strategic Organization, 19, 3: 513-525

Howard-Grenville, J. and Lahneman, B. (2021). Bringing the biophysical to the fore: Re-envisioning organizational adaptation in the era of planetary shifts. Strategic Organization, 19, 3: 478-493.

Inigo, E. A., Albareda L., and Titala, P. (2017). Business model innovation for sustainability: Exploring evolutionary and radical approaches through dynamic capabilities. Industry and Innovation, 24, 5, 515-542.

Jarzabkowski, P., Dowell, G. W. S. and Berchicci, L. (2021) Strategy and organization scholarsjhip through a radical sustainability lens: a call for 5.0. Strategic Organization, 19, 3:449-455.

Kurucz, E., Colbert, B, Ludeke-Freund, F, Upward, A., and Willard, B. (2017). Relational leadership for strategic sustainability: Practices and capabilities to advance the design and assessment of sustainable business models. Journal of Cleaner Production, 140, 189-204.

Lave, J., & Wenger, E. (1991). Situated learning: Legitimate peripheral participation. Cambridge university press.

Luo, B. N., Tang, Y., Chen, E. W., Li, S. and Luo, D. (2020) Corporate sustainability paradox management: a systematic review and future agenda. Frontiers in Psychology, 11, 1-15

MacArthur, E. (2021). Towards the Circular Economy, Vol 1: Economic and Business Rationale for a Circular Economy. Ellen MacArthur Foundation.

Nadelson, L. S., Albritton, S., Couture, V. G., Green, C., Loyless, S. D. and Shaw, E. O. (2020) Principals' perceptions of education equity: a mindset for practice. Journal of Education and Learning, 9, 1, 1-19.

Nosratabadi, S., Mosavi, A., Shamshirband, S., Zavadskas, E. K., Rakotonirainy, A., and Chau, K. W. (2019). Sustainable Business Models: A review. Sustainability, 11: 1663-1693.

Porter, M. E., & Kramer, M. R. (2002). The competitive advantage of corporate philanthropy. Harvard Business Review, 80(12), 56-68.

Ryan, A., Millar, C., Kajzer Mitchell, I., and Daskou, S. (2012). An interaction and networks approach to developing sustainable organisations. Journal of Organizational Change Management, 25, 4: 578-594.

Schein, E. H. (1983). Organizational Culture: A Dynamic Model. Alfred P Sloan School of Management Cambridge MA.

Starik, M. Rands, G. P. (1995). Weaving an integrated web: multilevel and multisystem perspectives of ecologically sustainable organisations. Academy of Management Review, 20(4):908-935.

Stubbs, W. and Cocklin, C. (2008). Conceptualizing a 'sustainability business model' Organization and Environment, 21(2), 103-127.

Tregaskis O., Edwards T., Edwards P., Ferner A. and Marginson P. (2010) 'Transnational learning structures in multinational firms: organisational context and national embeddedness'. Human Relations. 63(4), 471-499.

Tregaskis, O. (2003) Learning networks, power and legitimacy in multinational subsidiaries. International Journal of Human Resource Management, 14, 3, 1-17.

Tregaskis, O., and Almond, P. (2018) Multinationals and skills policy networks: HRM as a player in economic and social concerns. British Journal of Management, DOI: 10.1111/1467-8551.12276.

United National Disaster Risk Reduction 2020. The Human Cost of Disasters: An overview of the last 20 years (2000-2019). Geneva: Centre for Research on the Epidemiology of Disasters and UN Office for Disaster Risk Reduction.

Verhulst, E, and Van Doorsselaer, K. (2015). Development of a hands-on toolkit to support integration of ecodesign in engineering programmes. Journal of Cleaner Production, 108, 772-783.

Waddock, S. (2007). Leadership integrity in a fractured knowledge world. Academy of Management Learning and Education, 6, 4: 543-557.

Walls, J. L., Salaiz, A., and Chiu, S-C (2021). Wanted: Heroic leaders to drive the transition to 'business beyond usual'. Strategic Organization, 19, 3:494-512.

Westley, F., Olsson, P., Folke, C., Homer-Dixon, T, Vredenburg, H., Loorbach, D., Thompson, J., Nilsson, M., Lambin, E., Sendzimir, J., Banergee, B., Galaz, V. and Van Der Leeuw, S. (2011). Tipping toward sustainability: emerging pathways of transformation. AMBIO: A Journal of the Human Environment, 40 (7), 762-780.

Whiteman, G., Walker, B. and Perego, P (2013). Planetary boundaries: Ecological foundations for corporate sustainability. Journal of Management Studies, 50(2): 307-336.

Wiek, A., Withycombe, L., and Redman, C., (2011). Key competencies in sustainability: a reference framework for academic programme development. Sustainability Science, 6, 2: 203-218.

Wiliams, A., Kennedy, S., Philipp, F. et al. (2017) Systems thinking: a review of sustainability management research. Journal of Cleaner Production 148: 866-881.

Zhang X and Wu Z (2015) Are there future ways for regenerative sustainability? Journal of Cleaner Production 109: 39–41.